

Rodriguez, Susan (CONTR)

From: Smith, Wayne D
Sent: Friday, January 05, 2018 2:48 PM
To: Jereza, Catherine; Bowie, America
Subject: RE: 202c

Many thanks Katie.

Hope you have a wonderful weekend also!

-----Original Message-----

From: Jereza, Catherine
Sent: Friday, January 05, 2018 5:39 PM
To: Smith, Wayne D <Wayne.Smith@hq.doe.gov>; Bowie, America <America.Bowie@hq.doe.gov>
Subject: 202c

Hi Wayne and America,

Attached is the DOE implementing regulations document, which provides the information required for requesting an order from the Secretary. Right after we talked I found the email with the application and relevant attachments from PJM for the ongoing 202c emergency order that began back in June. So we have the real thing for the most recent order!

In the mean time I will ask Rakesh Batrah and my staff to provide the applications for the previous orders.

Have a great weekend!
Katie

Catherine Jereza
Deputy Assistant Secretary, Transmission Permitting & Technical Assistance
Office of Electricity Delivery & Energy Reliability
U.S. Department of Energy
(o) 202.586.0334
(c) (b) (6)

Shamika Lawrence
Shamika.Lawrence@hq.doe.gov
202.586.4666

**** Please contact Shamika for all meeting and scheduling requests. ****

Rodriguez, Susan (CONTR)

From: Batra, Rakesh
Sent: Monday, January 08, 2018 6:30 AM
To: Smith, Wayne D; Jereza, Catherine; Bowie, America
Cc: Mills, Brian; Rosenbaum, Matthew; Lawrence, Christopher
Subject: RE: 202c
Attachments: GRDA public 202(c) letter.pdf; PJM Dominion Original and 2 renewal Applications.pdf

We received 202 (c) applications from two applicants, PJM/Dominion and GRDA in 2017.
Attached are the PJM/Dominion Original and two renewal applications and GRDA application.

Please let me know if I could be of further assistance.

Thanks,
Rakesh

-----Original Message-----

From: Jereza, Catherine
Sent: Friday, January 05, 2018 5:52 PM
To: Batra, Rakesh <Rakesh.Batra@Hq.Doe.Gov>; Mills, Brian <Brian.Mills@hq.doe.gov>; Rosenbaum, Matthew <Matthew.Rosenbaum@hq.doe.gov>; Lawrence, Christopher <Christopher.Lawrence@hq.doe.gov>
Subject: FW: 202c

Brian McCormack requested the applications for all 202c orders in the past year. I had trouble finding them on the O Drive, but I at least had the first one from PJM.

Is the regulations I found on the O drive the correct version?

Can we have all the applications ready to go Monday morning?

Thanks!
Katie

-----Original Message-----

From: Jereza, Catherine
Sent: Friday, January 05, 2018 5:38 PM
To: Smith, Wayne D <Wayne.Smith@hq.doe.gov>; Bowie, America <America.Bowie@hq.doe.gov>
Subject: 202c

Hi Wayne and America,

Attached is the DOE implementing regulations document, which provides the information required for requesting an order from the Secretary. Right after we talked I found the email with the application and relevant attachments from PJM for the ongoing 202c emergency order that began back in June. So we have the real thing for the most recent order!

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Katie

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PUBLIC VERSION



April 11, 2017

The Honorable James Richard Perry
Secretary of Energy
United States Department of Energy
U.S. Department of Energy
1000 Independence Ave, SW
Washington, DC 20585

Re: Request for Emergency Order Pursuant to Section 202(c) of the Federal Power Act

Dear Secretary Perry:

The Grand River Dam Authority (“GRDA”), an agency of the State of Oklahoma, hereby notifies the Department of Energy (“DOE” or “Department”) of an imminent shortage of generation resources in its service area that constitutes an emergency within the meaning of Section 202(c) of the Federal Power Act (“FPA”) ¹ and requests that the Department invoke its emergency authority pursuant to Section 202(c) to alleviate such emergency.

This spring, because of a confluence of events that will result in the unavailability of all generation at GRDA’s principal generating facility, the Grand River Energy Center (“GREC”), GRDA will face an unexpected shortage of electric generation resources to address the reactive power needs of its service area. Specifically, from April 16, 2017 to July 15, 2017 (referred to herein as the “Emergency Period”), none of the GREC’s three generating units will be online due to: (i) the required closure of Unit No. 1 on April 15, 2017, pursuant to an Administrative Order issued by the Environmental Protection Agency (“EPA”); (ii) a lightning strike that seriously damaged Unit No. 2 on July 1, 2016, rendering it inoperable until August 2017; and (iii) unforeseen delays in the construction of a new generating unit (Unit No. 3) because of key supplier delays in the fabrication of essential project materials due to the August 2016 floods in Louisiana.

Without at least one of these three generating units available to generate electricity to provide reactive power needed for grid reliability during the Emergency Period, GRDA will be unable to meet the reactive power needs of its service area during any low-load, high voltage conditions that occur (hereinafter, GRDA refers to this shortage of available reactive power resources during the Emergency Period as the “Emergency”). This Emergency will require Southwest Power Pool, Inc. (“SPP”), the Reliability Coordinator for GRDA’s service area, to reconfigure the transmission system to mitigate the high voltage conditions by opening high voltage transmission lines. This method to address high voltage conditions on the transmission system is not as robust an engineering solution as the ability to operate a generator to provide

¹ 16 U.S.C. § 824a(c).



ADMINISTRATION
PO Box 406, Tulsa OK 74001-0406
918-250-6545, 918-250-6288 Fax

COAL-FIRED COMPLEX
PO Box 602, Chickasaw OK 74337
918-825-1074, 918-825-1701 Fax

ECOSYSTEMS & EDUCATION CENTER
PO Box 70, Langley OK 74350-0070
918-782-4728, 918-782-4723 Fax

ENGINEERING & TECHNOLOGY CENTER
9903 E 16th Street, Tulsa OK 74125
918-622-8228

ENERGY CONTROL CENTER
ROBERT L. KERR DAM
PO Box 772, Locust Grove OK 74352
918-470-5240, 918-825-1006 Fax

GRDA POLICE, PO Box 70, Langley OK
74350, 918-782-4728, 918-782-4723 Fax

OKLAHOMA CITY
201 NW 13th St, Suite 305
Oklahoma City OK 73116
405-297-9963, 405-990-7631 Fax

PENSACOLA DAM, PO Box 70, Langley
OK 74350, 918-782-5382, Also Fax

SALINA PUMPED STORAGE PROJECT
PO Box 609, Salina OK 74360
918-434-5820 Also Fax

TRANSMISSION HEADQUARTERS
PO Box 1125, Pryor OK 74362
918-825-0280, 918-825-0410 Fax

PUBLIC VERSION

dynamic reactive power control; opening a transmission line offers only a static solution that poses more reliability risk to the system and does not follow good utility practice to keep the system intact.

Accordingly, GRDA hereby submits this application pursuant to FPA § 202(c) and Subpart W of Part 205 of the Department's regulations² for an emergency order to provide reactive power from Unit No. 1 of the GREC from April 16, 2017 to July 15, 2017 consistent with the conditions herein, in the event that Southwest Power Pool, Inc. ("SPP") determines that such generation is needed to maintain grid reliability. As explained below, GRDA is requesting that SPP have the ability to call on Unit No. 1, which would otherwise be offline but available (using natural gas igniters if necessary), only if SPP sees a need for Unit No. 1 to run to address reliability concerns relating to overvoltage conditions.

I. BACKGROUND

GRDA is an agency of the State of Oklahoma, primarily serving public power communities in Oklahoma. Approximately 70 percent of GRDA's total electric energy is generated by the Grand River Energy Center, which is located near Chouteau, Oklahoma. GREC Units No. 1 and 2 are coal-fired generating units (with natural gas-fired igniters), with generating capacities of 490 and 520 megawatts (MW), respectively.

Due in part to EPA's Mercury and Air Toxics Standards (MATS) requirements, which would have required substantial upgrades for Unit No. 1, GRDA determined to retire Unit No. 1 and to construct a new, lower-emitting, natural gas-fired generation unit (Unit No. 3). GRDA is currently in the process of constructing Unit No. 3, which is a highly efficient 495 MW natural gas combined cycle unit. When GRDA commenced construction of Unit No. 3, it was projected to come online in May 2017. To maintain grid reliability during Unit No. 3's construction, EPA issued an Administrative Order ("AO") granting GRDA a one-year extension of the compliance deadline for Unit No. 1 to comply with EPA's MATS requirements. The AO, attached hereto as Attachment A, requires Unit No. 1 to cease operation as a coal-fired unit on April 15, 2017.³ The AO, issued under Section 113(a)(4) of the Clean Air Act, is nonrenewable.

As GRDA's principal electric generating station, the GREC plays a critical role in meeting all aspects of GRDA's electric load and in providing ancillary services, including reactive power. In particular, Unit No. 1 has traditionally played a key role in generating reactive power to provide local voltage support in GRDA's service area, particularly when Unit No. 2 has been out of service.

In 2014, SPP on six occasions requested either additional capacitive or reactive voltage support from Unit No. 1 to address voltage problems on the transmission system. During a planned maintenance outage of GREC Unit No. 2 for the period October 15, 2014 through November 4, 2014, SPP created a Temporary Operating Guide for Unit No. 1 requiring it to be

² 10 C.F.R. Part 205, Subpart W (2016).

³ Attachment A also includes an Amendment to the AO to account for increased reliance on Unit No. 1 after the lightning strike at Unit No. 2.

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available for dispatch during instances of low load and high voltage. The Operating Guide, attached as Attachment B, stated that “[d]ue to the low load and high voltage in the GRDA area, GRDA Unit #1 generation will be needed. Generation needs to be online in order to ensure voltage stability until GRDA Unit #2 returns from outage.”⁴ Unit No. 1 was in fact called upon by SPP to provide reactive support during a substantial portion of the period Unit No. 2 was on outage. GRDA’s transmission system, along with the conditions that give rise to the need to maintain the availability of Unit No. 1 to address low load, high voltage conditions, have not changed materially since SPP issued the Temporary Operating Guide.

II. APPLICATION FOR EMERGENCY ORDER

As explained below, GRDA requests that DOE determine that an emergency exists within the meaning of FPA § 202(c) with respect to the unavailability of Unit No. 1 during the Emergency Period, and order GRDA to run Unit No. 1 for the purpose of providing reactive power during the Emergency Period in the event that neither Unit No. 2 nor Unit No. 3 is online, and SPP determines that reactive power from Unit No. 1 is needed for purposes of grid reliability.

A. An Emergency Exists Because a Lightning Strike at Unit No. 2, and Unforeseeable Construction Delays at Unit No. 3, Will Leave GRDA Without the Ability to Generate Electricity for Reactive Power During the Emergency Period.

FPA § 202(c) provides that if “an emergency exists by reason of a sudden increase in the demand for electric energy, or a shortage of electric energy or of facilities for the generation or transmission of electric energy, or of fuel or water for generating facilities, or other causes” DOE may issue an order requiring the temporary connections of facilities, and such generation, delivery, interchange, or transmission of electric energy as it deems appropriate to best meet the emergency and serve the public interest. DOE’s regulations provide additional detail about what constitutes an “emergency” for purposes of Section 202(c) at 10 C.F.R. § 205.371:

“Emergency” . . . is defined as an unexpected inadequate supply of electric energy which may result from the unexpected outage or breakdown of facilities for the generation, transmission or distribution of electric power. Such events may be the result of weather conditions, acts of God, or unforeseen occurrences not reasonably within the power of the affected “entity” to prevent. An emergency also can result from . . . a regulatory action which prohibits the use of certain electric power supply facilities. Actions under this authority are envisioned as meeting a specific inadequate power supply situation. Extended periods of insufficient power supply as a result of inadequate planning or the failure to construct necessary facilities can result in an emergency as contemplated in these regulations. . . .

⁴ See SPP Temporary Operating Guide, “GRDA Unit #1 Manual Commitment,” Attachment B.

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The unavailability of Units No. 1, 2, and 3 at the GREC during the Emergency Period constitutes an emergency within the meaning of Section 202(c) and DOE's regulations. First, without the availability of at least one of these three generating units at the GREC, GRDA will be unable to provide reactive power for local voltage support to maintain grid stability in GRDA's service area in low load, high voltage conditions. In the past, Unit Nos. 1 and 2 have traditionally met GRDA's needs for reactive power. However, these generating units will be offline during the Emergency Period, and Unit No. 3 will still be under construction and therefore not yet online. GRDA has no other means to procure or provide adequate reactive power for local voltage support in its service area during the Emergency Period. GRDA does not own, or have control over, other resources that can provide sufficient reactive power in GRDA's service area to provide adequate voltage support under low load, high voltage conditions. GRDA cannot rely on temporary generation to produce the needed reactive power because of the quantity of potential reactive power that might be needed under low load, high voltage conditions. (For instance, SPP called upon Unit No. 1 to provide more than 100 MVars of reactive power in 2016 under low load, high voltage conditions.)

Further, SPP's ability to address the reactive power needs of GRDA's service area without Unit No. 1 is limited and inadequate. SPP has the ability to reduce reactive power needs during the Emergency Period through reconfiguring its transmission system by opening transmission lines. However, this is not an optimal solution, because it would not allow SPP to maintain its system in an intact state consistent with good utility practice. Opening transmission lines is a less reliable means of addressing reactive power needs than through dynamic reactive power generation resources because of the relative reliability risk it poses; reactive power cannot be controlled as easily through system configuration as it can through dynamic resources to respond to unexpected events, and the system is more vulnerable to outages because the system is not intact. Thus, SPP's ability to address reactive power needs in GRDA's service area without Unit No. 1 is a limited and less robust method to ensure reliability.

Second, this shortage of resources to generate reactive power during the Emergency Period was unexpected and unforeseeable by GRDA, which originally expected to have Unit No. 2 available, and Unit No. 3 coming online, during the Emergency Period. However, Unit No. 2 sustained extensive damage on July 1, 2016 from a fire caused by a lightning strike, which took Unit No. 2 offline. Repairs to Unit No. 2 are ongoing and will not be completed until August 2017. This lightning strike causing the fire at Unit No. 2 was an unforeseeable act of God, the effects of which were not within the power of GRDA to prevent.⁵ Likewise, Unit No. 3's commercial operation date has been delayed because of another unforeseeable act of God – the Louisiana floods of August 2016 – which delayed the ability of a key supplier to meet contractual commitments for critical materials for Unit No. 3's construction. Although GRDA planned for the shutdown of Unit No. 1 due to EPA's AO, DOE's regulations note that an emergency can result from "a regulatory action which prohibits the use of certain electric power supply facilities."⁶ Collectively, the unavailability of the GREC's three generating units, each for different reasons, over the Emergency Period gives rise to a "shortage of facilities for

⁵ 10 C.F.R. § 205.371.

⁶ 10 C.F.R. § 205.371.

generating electric energy” within the meaning of Section 202(c) of the FPA for GRDA’s service area.

B. GRDA’s Shortage of Reactive Power Resources During the Emergency Period Will Imperil Grid Reliability

During low load, high voltage conditions, an inability to provide sufficient reactive power for voltage support can imperil grid reliability by allowing the grid to exceed the range of acceptable system voltage.⁷ The inability to schedule sufficient reactive power can constitute a reliability standards violation, because under NERC Reliability Standard VAR-001-4.1 (Voltage and Reactive Control), transmission operators “shall schedule sufficient reactive resources to regulate voltage levels under normal and Contingency conditions.”⁸ A deficiency of reactive power can lead to disruption of service, because transmission facilities operating at voltages in excess of system voltage limits must be disconnected from other elements of the grid.⁹ If transmission facilities operating at excessive voltages are not disconnected, the overvoltages can cause electric arcing due to insulation “flash overs,” which can in turn result in physical damage to transmission facilities.¹⁰

GRDA’s impending shortage of reactive power resources increases the risk of service disruption to GRDA’s customers due to overvoltage, because the only means SPP will have to address reactive power needs is through reconfiguring the transmission system by opening a transmission line – a step that will mean the system is no longer intact. Good utility practice calls for the system to be maintained intact if possible. Without an intact system, GRDA’s system will be more vulnerable to disruption of service or outages as a result of unexpected events. SPP recognized the risks presented by a lack of reactive power resources at the GREC in 2014 when Unit No. 2 was on outage by issuing its Temporary Operating Guide for Unit No. 1. SPP has reaffirmed the importance of maintaining Unit No. 1 beyond April 15, 2017 for mitigation of system voltage issues and local grid reliability in a letter of support for this request, attached hereto as Attachment C.

C. GRDA Provides Power to Significant Regions in Oklahoma, Including Customers of National Significance

⁷ At low levels of electric system load, energized transmission lines may act as a capacitive load that increases system voltage.

⁸ NERC Reliability Standard VAR-001-4.1 (Voltage and Reactive Control), R1 (“Each Transmission Operator shall schedule sufficient reactive resources to regulate voltage levels under normal and Contingency conditions. Transmission Operators can provide sufficient reactive resources through various means including, but not limited to, reactive generation scheduling, transmission line and reactive resource switching, and using controllable load.”).

⁹ See Reliability Standard TOP-008-1 (Response to Transmission Limit Violations), R3 (“The Transmission Operator shall disconnect [an] affected facility if the overload on a transmission facility or abnormal voltage or reactive condition persists and equipment is endangered.”).

¹⁰ FERC Reliability Primer at 25 (“[H]igh voltages can exceed the insulation capabilities of equipment and cause dangerous electric arcs known as “flashovers.” These conditions can occur when there is light loading on the system (e.g., less customer demand), causing an excess of reactive power that elevates the voltage beyond safe operating limits.”).

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GRDA provides electric power on its transmission system to both retail and wholesale customers. GRDA provides retail electric service to 80 industrial and commercial customers, most of which are located in the MidAmerica Industrial Park (MAIP) near Pryor. [REDACTED]

[REDACTED] The 9,000 acre MAIP is home to over 80 companies employing over 4,500 people. There are also urgent care, emergency and life flight services within the MAIP boundaries. On the wholesale side, GRDA's largest customer is Western Farmers Electric Cooperative (WFEC) which is responsible for supplying power to [REDACTED] 18 member Oklahoma distribution cooperatives. GRDA provides power directly to over 16 municipalities, including [REDACTED] Coffeyville, Kansas, which has a strong industrial base, and the City of Stillwater, which is primarily residential and commercial service. There are 15 hospitals with a combined 1000+ bed-capacity in these cities. GRDA also provides electricity to the Oklahoma Municipal Power Authority (OMPA). Through support of OMPA, GRDA's generation provides a portion of the electric power to an additional 35 participating cities in Oklahoma. Directly and indirectly, GRDA provides electric power support to some portion of 75 of the Oklahoma's 77 counties.

D. Information Required By Section 205.373

Herein, GRDA sets forth the information required under Section 205.373 of DOE's regulations.¹¹ To ensure that DOE has the information it needs to evaluate GRDA's application, GRDA is providing certain additional information that GRDA deems salient to its application.

- (a) Legal Name of Applicant. The applicant is Grand River Dam Authority.
- (b) Person to Whom Correspondence Should Be Addressed. Correspondence with respect to this application should be directed to:

Daniel S. Sullivan
Chief Executive Officer
Grand River Dam Authority
P.O. Box 409
Vinita OK 74301-0409
(918)256-5545
dsullivan@grda.com

¹¹ Certain elements of Section 205.373 address the circumstances of an applicant facing a shortage of real power and the prospect of firm customer curtailment, but do not address GRDA's emergency circumstances, which involve a shortage of reactive power generation during light load conditions. GRDA has indicated where these requirements are Section 205.373 are not applicable to GRDA's circumstances.

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(c) Political Subdivision in Which GRDA Operates and Business Conducted. GRDA operates in 24 counties in Northeast Oklahoma. GRDA sells electricity to three customer classes in its service area: municipals, electric cooperatives and industries.

(d) Baseline Data.

(1) Daily peak load and energy requirements for each of the past 30 days, and projections for each day of the Emergency Period: These requirements are not applicable to GRDA's request, which contemplates relief in light load conditions. GRDA is providing information about the reactive power provided by Unit No. 1 in February 2017, the most recent month for which data is available, in Attachment D. GRDA provided reactive power pursuant to an SPP Temporary Operating Guide in the fall of 2014 period to maintain grid reliability. GRDA is providing data on the reactive power provided by Unit No. 1 during this time frame in Attachment E.

(2) All capacity and energy receipts or deliveries to other electric utilities for each of the past 30 days: Not applicable.

(3) The status of all interruptible customers for each of the past 30 days, and anticipated status during the Emergency Period: GRDA does not expect to interrupt any customers during the Emergency Period due to a lack of available energy. Interrupting load during the Emergency Period would exacerbate, rather than remedy, the low load, high voltage conditions that present an emergency for GRDA.

(4) All scheduled capacity and energy receipts or deliveries to other electric utilities during the Emergency Period. Not applicable.

(e) **A description of the emergency situation, any contingency plan of GRDA, and the current level of implementation.** The emergency situation GRDA faces is described above in Section II.A of this Application. Until GRDA can bring GREC Unit No. 2 or No. 3 online, GRDA does not have any contingency plan to provide reactive power for voltage support without Unit No. 1. As explained above in Section II.B, SPP's ability to address GRDA reactive power needs in low-load, high voltage conditions without Unit No. 1 is limited and poses increased reliability risks for GRDA's service area compared to operating Unit No. 1 for voltage support.

(f) **A showing that adequate electric service to firm customers cannot be maintained without additional power transfers.** Not applicable.

(g) **A description of any conservation or load reduction actions that have been implemented.** Not applicable. Reducing load via conservation or other load reduction actions under low load, high voltage circumstances would exacerbate, rather than mitigate, emergency overvoltage conditions.

(h) **A description of efforts made to obtain additional power through voluntary means and the results of such efforts.** GRDA does not have the ability to provide additional

PUBLIC VERSION

reactive power resources to alleviate the Emergency. GRDA is required to cease operation of Unit No. 1 as a coal-fired unit after April 15, 2017 pursuant to an Administrative Order under Section 113(a)(4) of the Clean Air Act. An order issued under Section 113(a)(4) is nonrenewable, and therefore, EPA does not have authority to extend the compliance deadline in the AO and further delay compliance with MATS for Unit No. 1. Unit No. 2 is undergoing repairs as quickly as possible, but the unit will not be available during the Emergency Period. Construction on Unit No. 3 is not expected to be completed until sometime in June 2017, at the earliest, and may not be available at all during the Emergency Period.

- (i) **A listing of proposed sources and amounts of power necessary from each source to alleviate the emergency and a listing of any other “entities” that may be directly affected by the requested order.** The only generation source that GRDA proposes to alleviate the Emergency is Unit No. 1 of the GREC. Based on historical data, GRDA expects that it could be called upon to absorb up to 120 MVar or more from the grid if called on by SPP for local voltage support in low load, high voltage conditions.

Two entities would be directly affected by GRDA’s requested order. First, SPP manages grid operations for GRDA’s transmission assets, and thus would be directly responsible for addressing any grid instability resulting from the Emergency. If DOE grants GRDA’s request for relief herein, SPP would be able to dispatch Unit No. 1 to absorb reactive power if it determines that such generation is necessary to maintain grid reliability. Second, EPA would be directly affected, because running Unit No. 1 after April 15, 2017, would contravene the terms of EPA’s AO and the Clean Air Act, which require GRDA to cease coal-fired operations at Unit No. 1 after April 15, 2017.

- (j) **Specific proposals to compensate the supplying “entities” for the emergency services requested and to compensate any transmitting “entities” for services necessary to deliver such power.** GRDA proposes that, during the Emergency Period, it be compensated for any generation from Unit No. 1 directed by SPP pursuant to a DOE Section 202(c) Order consistent with the terms of the SPP Tariff.
- (k) **A showing that, to the best of the applicant's knowledge, the requested relief will not unreasonably impair the reliability of any “entity” directly affected by the requested order to render adequate service to its customers.** To GRDA’s knowledge, ordering reactive power generation from Unit No. 1, which is currently an SPP generating resource, will not impair the reliability of any entity.
- (l) **Description of the facilities to be used to transfer the requested emergency service to the applicant's system.** Not applicable.
- (m) **A general or key map on a scale not greater than 100 kilometers to the centimeter showing, in separate colors, the territory serviced by each “entity” named in the application; the location of the facilities to be used for the generation and transmission of the requested emergency service; and all connection points between systems.** This information is attached as Attachment F.

(n) **An estimate of the construction costs of any proposed temporary facilities and a statement estimating the expected operation and maintenance costs on an annualized basis.** Not applicable

(o) **Supplemental Information.** A letter from SPP in support of GRDA's request for action under FPA Section 202(c) is attached as Attachment C.

E. Compliance with Applicable Environmental Laws Under Section 202(c)(2).

Section 202(c)(2) of the FPA provides that when DOE issues an order under Section 202(c) that results in a conflict with Federal, State, or local environmental law, DOE is required to ensure that the order requires generation, delivery, interchange, or transmission of electric energy only during hours necessary to meet the emergency and serve the public interest, and, to the maximum extent practicable, is consistent with applicable Federal, State, or local environmental law and minimizes any adverse environmental impacts.¹² Herein, GRDA is requesting authorization to generate electricity to provide reactive power support from Unit No. 1 of the GREC after April 15, 2017, which would contravene EPA's Administrative Order on MATS Compliance for Unit No. 1.¹³

To ensure compliance with the AO to the maximum extent possible and minimize environmental impacts pursuant to Section 202(c)(2), GRDA commits that, in the event DOE issues a Section 202(c) order directing the generation of reactive power from Unit No. 1 of the GREC, GRDA will generate from Unit No. 1 only when called upon by SPP pursuant to DOE's order, and will otherwise keep Unit No. 1 offline. Although Unit No. 1 must burn coal to generate reactive power, GRDA Unit No. 1 has natural gas igniters available to keep Unit No. 1 in a ready state, if necessary. This will ensure compliance with EPA's AO to the maximum extent possible given that the AO does not prohibit the use of natural gas at Unit No. 1. Because GRDA can keep Unit No. 1 ready, Unit No. 1 does not need to maintain a minimum generation level or be synchronized to the grid to be ready to respond if called upon by SPP to provide reactive power. Unit No. 1 can be brought online to generate reactive power from an offline state within 24 hours, which is within the window of notice that SPP would give GRDA to generate reactive power.

Additionally, GRDA commits to cease all generation from Unit No. 1 as soon as GREC Unit No. 3 or Unit No. 2 is brought online, in which case either unit would be able to act as a reactive power resource for GRDA.

F. Request for Designation of Critical Electrical Infrastructure Information

Pursuant to Section 215A of the FPA, GRDA requests that the Department designate the bracketed information in Section II.C as critical electrical infrastructure information protected

¹² 16 U.S.C. § 824a(c)(2).

¹³ See Attachment A at P 31.

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from disclosure under the Freedom of Information Act and other public disclosure laws.¹⁴ The bracketed information includes information relating to the production, generation, and transmission of energy that could be useful to a person in planning an attack on critical infrastructure.¹⁵

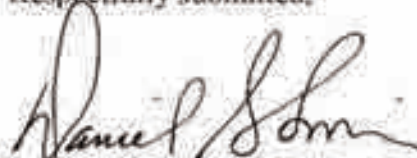
G. Requested Order

As explained herein, GRDA respectfully requests that DOE issue an emergency order directing the generation of electricity to provide reactive power from Unit No. 1 of the GREC from April 16, 2017 to (i) July 15, 2017, or (ii) the date on which GREC No. 3 or No. 2 is brought online, whichever is earlier, in the event that Southwest Power Pool, Inc. ("SPP") determines that generation from Unit No. 1 is needed to maintain grid reliability, subject to the requirements that Unit No. 1 remain offline unless requested to generate by SPP pursuant to a DOE Section 202(c) order.

III. CONCLUSION

GRDA respectfully requests that DOE take the emergency action requested herein as soon as possible to address the imminent shortage of reactive power that GRDA faces in its service area. GRDA stands ready to answer any questions that DOE may have, and to provide any additional information that DOE requires.

Respectfully submitted,



Daniel S. Sullivan
Chief Executive Officer
Grand River Dam Authority

Cc: Patricia A. Hoffman, Principal Deputy Assistant Secretary and Acting Assistant Secretary, DOE Office of Electricity Delivery & Energy Reliability

Attachments

¹⁴ 16 U.S.C. § 824a(c)(2).

¹⁵ See 18 C.F.R. § 388.113(d)(1)(i). GRDA requests the bracketed information be designated critical electric infrastructure information for as long as permissible. See 18 C.F.R. § 388.113(d)(1)(ii).

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CERTIFICATE OF SERVICE

I hereby certify that I have this 11th day of April, 2017, caused copies of the foregoing documents to be served on the parties listed below by causing copies of the same to be sent via overnight delivery.

Michael Bardee
Director, Office of Electric Reliability
Federal Energy Regulatory Commission
888 First Street, NE
Washington, DC 20426

Administrator Scott Pruitt
U.S. Environmental Protection Agency
Mail code 1101A
1200 Pennsylvania Avenue, N.W.
Washington, DC 20460

Southwest Power Pool, Inc.
c/o Lanny Nickell, Vice President, Engineering
415 North McKinley Street, Suite 140
Little Rock, AR 72205

Ronald W. Ciesiel
General Manager
Southwest Power Pool Regional Entity
201 Worthen Drive
Little Rock, AR 72223

/s/ Nathan Reese

Nathan Reese
Assistant General Counsel
Grand River Dam Authority

Attachment A

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
AIR ENFORCEMENT DIVISION, OFFICE OF ENFORCEMENT AND COMPLIANCE ASSURANCE
BEFORE THE ADMINISTRATOR

In the Matter of:

Grand River Dam Authority,

Respondent.

Administrative Compliance Order on Consent
AED-CAA-113(a)-2016-0002

ADMINISTRATIVE COMPLIANCE ORDER

A. PRELIMINARY STATEMENT

1. This Administrative Compliance Order (“Order”) is issued under the authority vested in the Administrator of the U.S. Environmental Protection Agency (“EPA”) by Section 113(a) of the Clean Air Act (the “CAA” or “Act”), 42 U.S.C. § 7413(a)(3) and (4).
2. On the EPA’s behalf, Phillip A. Brooks, Division Director of the Air Enforcement Division, Office of Civil Enforcement, Office of Enforcement and Compliance Assurance, U.S. Environmental Protection Agency, is delegated the authority to issue this Order under Section 113(a) of the Act.
3. Respondent is Grand River Dam Authority, an agency of the state of Oklahoma. Respondent is a “person” as defined in Section 302(e) of the Act, 42 U.S.C. § 7602(e). Respondent owns and/or operates the Grand River Energy Center (hereafter, the “Facility”), located in the state of Oklahoma.
4. Respondent signs this Order on consent.

B. STATUTORY AND REGULATORY BACKGROUND

5. Section 112 of the CAA, 42 U.S.C. § 7412, authorizes the Administrator of EPA to regulate hazardous air pollutants (“HAPs”) which may have an adverse effect on health or the environment.

6. Pursuant to Section 112 of the CAA, the EPA finalized National Emission Standards for Hazardous Air Pollutants: Coal- and Oil-Fired Electric Utility Steam Generating Units Subpart UUUUU on December 16, 2011, 77 FR 9304 (Feb. 16, 2012) (40 C.F.R. Part 63 Subpart UUUUU), commonly known as the “Mercury and Air Toxics Standards.” *Id.* (hereafter, “MATS”). The MATS adopt emission limits on mercury, acid gases and other toxic pollutants for affected coal and oil-fired electric generating utility units (“EGUs”).
7. Pursuant to 40 C.F.R. § 63.9981, the MATS applies to owners or operators of coal-fired EGUs or oil-fired EGUs as defined in 40 C.F.R. § 63.10042.
8. Pursuant to 40 C.F.R. § 63.2, “owner or operator” is defined as “any person who owns, leases, operates, controls, or supervises a stationary source.”
9. Section 111(a)(3) of the Act, 42 U.S.C. § 7411(a)(3), and 40 C.F.R. § 63.2 defines a “stationary source” as “any building, structure, facility, or installation which emits or may emit any air pollutant.”
10. Pursuant to 40 C.F.R. § 63.2, “affected source” is defined as “the collection of equipment, activities, or both within a single contiguous area and under common control that is included in a Section 112(c) source category or subcategory for which a Section 112(d) standard or other relevant standard is established pursuant to Section 112 of the Act.”
11. Pursuant to 40 C.F.R. § 63.9982, the affected source to which the provisions of the MATS, 40 C.F.R. Part 63, Subpart UUUUU, applies is the collection of all existing coal- or oil-fired EGUs, as defined in 40 C.F.R. § 63.10042, within a subcategory, [and] ... each new or reconstructed coal- or oil-fired EGU, as defined in 40 C.F.R. § 63.10042.
12. On December 16, 2011, in parallel with finalizing the MATS, the Office of Enforcement and Compliance Assurance issued a policy memorandum describing its intended approach regarding issuance of Section 113(a) administrative orders (“Orders”) to sources that are unable to comply

with the MATS but that may need to operate for up to a year to address a specific and documented reliability concern. See The Environmental Protection Agency's Enforcement Response Policy For Use Of Clean Air Act Section 113(a) Administrative Orders In Relation To Electric Reliability And The Mercury and Air Toxics Standard (hereafter, "2011 MATS Enforcement Policy"). The 2011 MATS Enforcement Policy is limited in application to units that are critical for reliability purposes.

13. In issuing the 2011 MATS Enforcement Policy, the EPA believed that there would be few, if any, cases in which affected sources would not be able to comply with the MATS within the compliance period specified by Section 112(i)(3) of the CAA (including, as applicable, any extensions permitted under Section 112(i)(3)(B)), which has proven to be the case. Nonetheless, the EPA acknowledged that there may be isolated instances in which the deactivation or retirement of a unit or a delay in installation of controls due to factors beyond the owner's/operator's control could have an adverse, localized impact on electric reliability that could not be timely predicted or planned for with specificity. In such instances, sources could find themselves in the position of either operating in noncompliance with the MATS or halting operations and thereby potentially impacting electric reliability. Thus, although the EPA generally does not speak publicly to the intended scope of its enforcement efforts in advance of the date when a violation may occur, the Agency issued the 2011 MATS Enforcement Policy to describe the EPA's intended enforcement response in such instances and to provide confidence with respect to electric reliability. The policy is informed, as are EPA's enforcement actions in general, by the need to find an appropriate balance between critical public interests, bearing in mind the resources and process time required for any enforcement response.
14. The 2011 MATS Enforcement Policy specifies that to qualify for an Order in connection with it, an owner/operator must, in summary, provide early written notice of its compliance plans to

the Planning Authority¹ for the area in which the source is located, timely request an Order and provide notice of such request to the EPA, FERC, its Planning Authority, any state public utility or service commission, and any state, tribal or local environmental agencies, with jurisdiction over the area in which the EGU is located, and submit a complete request for an Order.

15. A complete request pursuant to the 2011 MATS Enforcement Policy must include the following elements: copies of the early notice provided to the Planning Authority; written analysis of the reliability risk, which demonstrates that operation of the unit after the MATS Compliance Date is critical to maintaining electric reliability; written concurrence with the reliability analysis by the relevant Planning Authority (or a written explanation of why such concurrence cannot be provided); copies of any written comments received from third parties in favor of, or opposed to, operation of the unit after the MATS Compliance Date; a plan to achieve compliance with the MATS no later than one year after the MATS Compliance Date; and identification of the level of operation required to avoid the reliability risk and proposed operational limits and/or work practices to minimize or mitigate emissions to the extent practicable during non-compliant operation.
16. With respect to the demonstration of reliability risk, the 2011 MATS Enforcement Policy states that the analysis provided in an Order request should demonstrate that operation of the unit after the MATS Compliance Date is critical to maintaining electric reliability, and that failure to operate the unit would: (a) result in the violation of at least one of the reliability criteria required to be filed with the Commission, and, in the case of the Electric Reliability Council of

¹ Planning Authorities are the entities tasked, under NERC reliability standards, with addressing electric reliability through grid planning. In the 2011 MATS Enforcement Policy, Planning Authority was defined as “the entity defined as such in the “Glossary of Terms Used in NERC Reliability Standards,” available at: http://www.nerc.com/docs/standards/rs/Reliability_Standards_Complete_Set.pdf, or any successor term thereto approved by FERC, and includes, in relevant jurisdictions, RTOs and ISOs.”

Texas, with the Texas Public Utility Commission; or (b) cause reserves to fall below the required system reserve margin.

17. Although the EPA's issuance of an Order is not conditioned upon the approval or concurrence of any entity, in light of the complexity of the electric system and the local nature of many reliability issues, for purposes of using its Section 113(a) Order authority in connection with the 2011 MATS Enforcement Policy, the EPA has sought advice in the identification and/or analysis of reliability risks, as necessary and on a case-by-case basis from reliability experts, including, but not limited to, the Federal Energy Regulatory Commission ("FERC"), Regional Transmission Operators ("RTOs"), Independent System Operators and other Planning Authorities, as EPA indicated it would do in the 2011 MATS Enforcement Policy.
18. The 2011 MATS Enforcement Policy specifically stated that an owner/operator interested in receiving a Section 113(a) administrative order pursuant to the policy should provide FERC with a copy of its complete and timely written request to the EPA.
19. On May 17, 2012, FERC issued a policy statement explaining how it intended to provide advice to the EPA on requests for an administrative order pursuant to the 2011 MATS Enforcement Policy. *See* Policy Statement of the Commission's Role Regarding the Environmental Protection Agency's Mercury and Air Toxics Standards, 139 FERC ¶ 61,131 (2012) ("FERC Policy Statement"). The FERC Policy Statement provided that the Commission will advise the EPA by submitting written Commission comments to the EPA based on the Commission's review of the information provided in an informational filing containing the copy of the request for the administrative order provided to the Commission in an AD docket. *Id.* at Paragraph 21. Further, the FERC Policy Statement indicated that the Commission's comments would provide advice to the EPA on whether, based on the Commission's review of the informational filing, there might be a violation of a Commission-approved Reliability Standard, and may also identify issues

within its jurisdiction other than a potential violation of a Commission-approved Reliability Standard. *Id.*

C. FINDINGS

20. Respondent owns and/or operates an existing coal-fired electric utility steam generating unit, as defined in 40 C.F.R. § 63.10042.
21. Respondent's operation at the Facility is subject to the MATS.
22. On November 28, 2012, Respondent received a one year extension pursuant to 40 C.F.R. 63.6(i)(4)(i)(A) from its permitting authority, extending the date by which it must comply with the MATS to April 15, 2016. *See* November 28, 2012 Letter from Steven A. Thompson, Oklahoma Department of Environmental Quality to Grand River Dam Authority.
23. On February 19, 2015, Respondent submitted a timely and complete request for an Order pursuant to the 2011 MATS Enforcement Policy to the EPA, with a copy to FERC. That request can be found in the FERC AD docket, AD15-6-000 (hereafter "Order Request").
24. Pursuant to the Order Request, Respondent seeks an Order from April 16, 2016 through April 15, 2017, on the grounds that it will not be able to comply with the MATS at Unit No. 1 of the Grand River Energy Center located near Chouteau, Oklahoma, without violating its system reserve margin of 12%, until the construction of a new, highly efficient natural gas-fired combined cycle combustion turbine (Unit No. 3) is completed as a replacement for Unit No. 1. Unit No. 3 will not be operational until shortly after April 16, 2017. *See id.*
25. More specifically, the Order Request states that Respondent, "a load serving member of the Southwest Power Pool (SPP) [Respondent's Planning Authority], states that it will be unable to meet its required reserve margin of 12 percent capacity if Unit No. 1 is retired before new Unit No. 3 becomes operational. Order Request at 6; *see also*, Southwest Power Pool, Criteria 2.1.9 (Minimum Required Capacity Margin) (revised July 29, 2014), available at

<http://www.spp.org/publications/SPP%20Criteria%20&%20Appendices%20July%2029,%202014.pdf>. Respondent indicates that the untimely loss of Unit No. 1 would prevent it from meeting its basic load obligations by 245 MW. *Id.* Additionally, Respondent states that Unit No. 1 has been used for local voltage support, noting that “there were six instances in 2014 where the GRDA System Operator requested either additional capacitive or reactive voltage support from Unit No. 1 to address voltage problems on the transmission system.” Order Request at 7. Respondent further claims that it has “experienced problems under certain conditions obtaining firm or non-firm transmission service to deliver power purchases from outside of the GRDA balancing area” when one or both of its existing units are offline, and without an administrative order, it “is concerned that transmission constraints will make importing sufficient replacement capacity and energy very difficult.” *Id.*

26. In a memorandum attached to Respondent’s submission, SPP concurred with Respondent’s reserve margin assessment. See Order Request, Attachment C (SPP January 27, 2014 Memorandum) at 2 (“[a] review of GRDA’s supply adequacy without GRDA unit 15-1 indicates that the firm resources available to GRDA fall below their 12% minimum capacity margin requirement in 2016”). Additionally, SPP concurred that SPP “has observed, over the last year, the need to commit GRDA Unit 1 for relief from high voltages ... [and that] SPP concurs with GRDA’s assessment regarding GRDA Unit 1’s criticality for reliability absent other system changes.” Order Request, Attachment E (SPP February 6, 2015 Letter) at 1.
27. FERC reviewed the reliability risk presented in the request in accordance with the FERC Policy Statement and on April 16, 2015 found that “the loss of GRDA’s Unit No. 1 would result in GRDA falling below the 12 percent capacity reserve requirement stipulated in SPP Criteria 2.1.9 unless GRDA is able to procure replacement capacity for the unit and associated firm transmission service,” and “[a]bsent a significant change in future circumstances, [FERC’s] view is that GRDA’s

Unit No. 1 is needed as requested by GRDA to maintain electric reliability.” See Commission Comments On Grand River Dam Authority’s Request For EPA Administrative Order (April 16, 2015), p. 4, Docket No. AD15-6-000. Additionally, FERC notes that “the reliability of the Bulk-Power System depends in part on whether utilities meet an appropriate planning reserve margin.” *Id.*

28. Respondent proposes to minimize emissions by implementing a bidding approach with SPP, in a manner consistent with the SPP Tariff and market rules, to limit the total electricity generated by Unit No. 1 while maintaining its reserve margin. See Order Request at 12-13. Specifically, Respondent shall bid Unit No. 1 to achieve a total annual capacity factor of not more than 50% during the period from April 16, 2016 up to April 16, 2017, which is lower than its historical operation as a base load facility of approximately 70% annual capacity. *Id.* Although the monthly capacity factor of Unit No. 1 would vary to allow Respondent to meet its reserve margin requirements throughout the period covered by this Order, Respondent states that reducing the annual capacity factor to 50% will result in approximately 30% lower total emissions during the period from April 16, 2016 up to April 16, 2017. *Id.*

D. ORDER

29. Respondent is ordered to take the actions described in this section of this Order.
30. From April 16, 2016 through April 15, 2017, Respondent shall implement a bidding approach with SPP, while maintaining Respondent’s reserve margin, in a manner consistent with the SPP Tariff and market rules, to limit the total electricity generated by Unit No. 1 to achieve a total annual capacity factor of not more than 50% during the period from April 16, 2016 through April 15, 2017.
31. By 11:59 pm April 15, 2017, Respondent shall achieve full compliance with the MATS at Unit No. 1 at the Facility by permanently ceasing operation as a coal-fired unit.

32. Within 30 days of achieving full compliance with the MATS at the Facility, Respondent shall provide written notice to the EPA indicating that compliance has been achieved and the date by which it was achieved, pursuant to the process specified in paragraph 39 of this Order.

E. OTHER TERMS AND CONDITIONS

33. Respondent admits the jurisdictional allegations contained in Sections A (Preliminary Statement) and B (Statutory and Regulatory Background) of this Order.
34. Respondent neither admits nor denies the findings in Section C (Findings) of this Order.

F. GENERAL PROVISIONS

35. Any violation of this Order may result in a civil administrative or judicial action for an injunction or civil penalties of up to \$37,500 per day per violation, or both, as provided in Sections 113(b)(2) and 113(d)(1) of the Act, 42 U.S.C. §§ 7413(b)(2) and 7413(d)(1), as well as criminal sanctions as provided in Section 113(c) of the Act, 42 U.S.C. § 7413(c). The EPA may use any information submitted under this Order in an administrative, civil judicial, or criminal action.
36. Nothing in this Order shall relieve Respondent of the duty of achieving and maintaining compliance with all applicable provisions of the Act or other federal, state or local laws or statutes, nor shall it restrict the EPA's authority to seek compliance with any applicable laws or regulations, nor shall it be construed to be a ruling on, or determination of, any issue related to any federal, state, or local permit.
37. Nothing herein shall be construed to limit the power of the EPA to undertake any action against Respondent or any person in response to conditions that may present an imminent and substantial endangerment to the public health, welfare, or the environment.
38. The provisions of this Order shall apply to and be binding upon Respondent and its officers, directors, employees, agents, trustees, servants, authorized representatives, successors, and assigns. From the Effective Date of this Order until the Termination Date as set out in paragraph

44 below, Respondent must give written notice and a copy of this Order to any successors in interest prior to any transfer of ownership or control of any portion of or interest in the Facility. Simultaneously with such notice, Respondent shall provide written notice of such transfer, assignment, or delegation to the EPA. In the event of any such transfer, assignment, or delegation, Respondent shall not be released from the obligations or liabilities of this Order unless the EPA has provided written approval of the release of said obligations or liabilities.

39. Unless this Order states otherwise, whenever, under the terms of this Order, written notice or other documentation is required to be given, it shall be directed to the individuals specified at the addresses below unless those individuals or their successors give notice of a change of address to the other party in writing:

Phillip A. Brooks
Division Director of the Air Enforcement Division, Office of Civil Enforcement, Office of Enforcement and Compliance Assurance, US Environmental Protection Agency
Mail Code 2242A, Room 1119
1200 Pennsylvania Ave, NW
Washington, DC 20460 mail or 20004 courier (note Room 1119 on courier packages)

Anupa Ahuja
Air Enforcement Section
Mail Code 6EN-AA
US EPA Region 6
1445 Ross Ave
Dallas, TX 75202
Phone: (214)665-2701

Daniel S. Sullivan
Grand River Dam Authority
P.O. Box 409
226 West Dwain Willis Avenue
Vinita, OK 74301
Phone: (918)256-5545

Britt S. Fleming
Van Ness Feldman, LLP
1050 Thomas Jefferson Street, NW
Washington, DC 20007
Phone: (202)298-1863

All notices and submissions shall be considered effective upon receipt.

40. To the extent this Order requires Respondent to submit any information to the EPA, Respondent may assert a business confidentiality claim covering part or all of that information, but only to the extent and only in the manner described in 40 C.F.R. Part 2, Subpart B. The EPA will disclose information submitted under a confidentiality claim only as provided in 40 C.F.R. Part 2, Subpart B. If Respondent does not assert a confidentiality claim, the EPA may make the submitted information available to the public without further notice to Respondent.
41. Each undersigned representative of the Parties certifies that he or she is authorized to enter into the terms and conditions of this Order to execute and bind legally the Parties to this document.

G. EFFECTIVE DATE AND OPPORTUNITY FOR A CONFERENCE

42. Pursuant to Section 113(a)(4) of the Act, an Order does not take effect until the person to whom it has been issued has had an opportunity to confer with the EPA concerning the alleged violations. By signing this Order, Respondent acknowledges and agrees that it has been provided an opportunity to confer with the EPA prior to issuance of this Order. Accordingly, this Order will take effect immediately upon signature by the latter of Respondent or the EPA.

H. JUDICIAL REVIEW

43. Respondent waives any and all remedies, claims for relief and otherwise available rights to judicial or administrative review that Respondent may have with respect to any issue of fact or law set forth in this Order, including any right of judicial review under Section 307(b)(1) of the Clean Air Act, 42 U.S.C. § 7607(b)(1).

I. TERMINATION

44. This Order shall terminate on the earlier of the following (the “Termination Date”) at which point Respondent shall operate in compliance with the Act:

- a. 11:59 pm April 15, 2017;
- b. The effective date of any determination by the EPA that Respondent has achieved compliance with all terms of this Order; or
- c. Immediately upon receipt by Respondent of notice from the EPA finding that an imminent and substantial endangerment to public health, welfare, or the environment has occurred.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
AIR ENFORCEMENT DIVISION, OFFICE OF ENFORCEMENT AND COMPLIANCE ASSURANCE
BEFORE THE ADMINISTRATOR

In the Matter of:


Grand River Dam Authority,

Respondent:

Administrative Compliance Order on Consent
AED-CAA-113(a)-2016-0002

For United States Environmental Protection Agency, Air Enforcement Division, Office of Enforcement
and Compliance Assurance:

4/16/2016
Date:


Phillip A. Brooks
Division Director of the Air Enforcement Division, Office of Civil
Enforcement, Office of Enforcement and Compliance Assurance,
US Environmental Protection Agency
Mail Code 2242A, Room 1119
1200 Pennsylvania Ave, NW
Washington, DC 20460 mail or 20004 courier (note Room 1119
on courier packages)

For Grand River Dam Authority:


Signature:

April 7, 2016
Date

Printed Name: Daniel S. Sullivan

Title: General Manager/CEO

Address: P.O. Box 409, 226 West Dwain Willis Avenue, Vinita, OK 74301

CERTIFICATE OF SERVICE

I certify that the foregoing "Administrative Compliance Order" in the Matter of Grand River Dam Authority, Order AED-CAA-113(a)-2016-0002, was filed and copies of the same were mailed to the parties as indicated below.

Certified Mail

Daniel S. Sullivan
Grand River Dam Authority
P.O. Box 409
226 West Dwain Willis Avenue
Vinita, OK 74301
Phone: (918)256-5545

Britt S. Fleming
Van Ness Feldman, LLP
1050 Thomas Jefferson Street, NW
Washington, DC 20007
Phone: (202)298-1863

Eddie Terrill
Director, Air Quality Division Oklahoma Department of Environmental Quality
P.O. Box 1677
Oklahoma City, OK 73101-1677

4/18/16
Date


Tawanna Cathey

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
AIR ENFORCEMENT DIVISION, OFFICE OF ENFORCEMENT AND COMPLIANCE ASSURANCE
BEFORE THE ADMINISTRATOR

In the Matter of:

Grand River Dam Authority,

Respondent.

Amendment
Administrative Compliance Order on Consent
AED-CAA-113(a)-2016-0002

AMENDMENT – ADMINISTRATIVE COMPLIANCE ORDER

A. PRELIMINARY STATEMENT

1. This is an amendment (the "Amendment") to the Administrative Compliance Order on Consent, AED-CAA-113(a)-2016-0002, ("Order") issued on April 16, 2016 by the U.S. Environmental Protection Agency ("EPA") to the Grand River Dam Authority ("Respondent"). A copy of the Order is attached to this Amendment as Attachment A. Unless otherwise indicated, defined terms in this Amendment have the same meaning as in the Order.

B. FINDINGS

2. From July 1, 2016 to July 2, 2016, a series of events arose from causes beyond the control of Respondent that require amendment to the terms of the Order. Specifically, during a storm, there was a lightning strike at the Facility, which resulted in a significant fire that severely damaged Unit 2 and moderately damaged Unit 1. Unit 1 returned to service on July 20, 2016. Unit 2 is not expected to return to service until after Unit 1 permanently ceases operation as a coal-fired unit on April 15, 2017.
3. As a result of Unit 2, a 520 MW unit, being out of service during the period covered by the Order, Respondent will not be able to meet the terms of operation of Unit 1 detailed in the Order without violating the reliability risks described in paragraphs 24 – 28 of the Order. To address those reliability risks, it is necessary to amend the Order to allow for increased

operation of Unit 1. During the period in July when both units were out of service, voltage support was not required and Respondent was able to make other short term power purchases to meet basic load requirements.

C. ORDER

4. Paragraph 30 of the Order is replaced with the following requirement: From April 16, 2016 through April 15, 2017, Respondent shall implement a bidding approach with SPP, while maintaining Respondent's reserve margin, in a manner consistent with the SPP Tariff and market rules, to limit the total electricity generated by Unit No. 1 to achieve a total annual capacity factor of not more than 80% during the period from April 16, 2016 through April 15, 2017.

D. GENERAL PROVISIONS

5. Unless explicitly modified in this Amendment, all provisions of the Order remain in effect.
6. Each undersigned representative of the Parties certifies that he or she is authorized to enter into the terms and conditions of this Amendment to execute and bind legally the Parties to this document.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
AIR ENFORCEMENT DIVISION, OFFICE OF ENFORCEMENT AND COMPLIANCE ASSURANCE
BEFORE THE ADMINISTRATOR

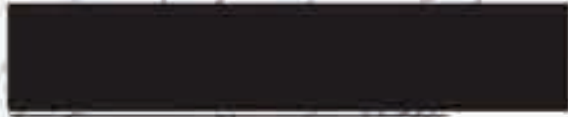
In the Matter of:

Grand River Dam Authority,
Respondent.

Amendment
Administrative Compliance Order on Consent
AED-CAA-113(a)-2016-0002

For United States Environmental Protection Agency, Air Enforcement Division, Office of Enforcement and Compliance Assurance:

9/14/2016
Date


Phillip A. Brooks
Division Director of the Air Enforcement Division, Office of Civil Enforcement, Office of Enforcement and Compliance Assurance, US Environmental Protection Agency
Mail Code 2242A, Room 1119
1200 Pennsylvania Ave, NW
Washington, DC 20460 mail or 20004 courier (note Room 1119 on courier packages)

For Grand River Dam Authority:



Signature

Sept. 8, 2016
Date

Printed Name: Daniel S. Sullivan
Title: General Manager/CEO
Address: P.O. Box 409, 226 West Dwain Willis Avenue, Vinita, OK 74301

CERTIFICATE OF SERVICE

I certify that the foregoing "Amendment" to the Administrative Compliance Order in the Matter of Grand River Dam Authority, Amendment AED-CAA-113(a)-2016-0002, was filed and copies of the same were mailed to the parties as indicated below.

Certified Mail

Daniel S. Sullivan
Grand River Dam Authority
P.O. Box 409
226 West Dwain Willis Avenue
Vinita, OK 74301
Phone: (918)256-5545

Britt S. Fleming
Van Ness Feldman, LLP
1050 Thomas Jefferson Street, NW
Washington, DC 20007
Phone: (202)298-1863

Eddie Terrill
Director, Air Quality Division Oklahoma Department of Environmental Quality
P.O. Box 1677
Oklahoma City, OK 73101-1677

Date

Tawanna Cathey

Attachment B

Temporary Operating Guide

Title: GRDA Unit #1 Manual Commitment

System Conditions: Intact

Written by: Patrick deLassus (SPP)

Reviewed by: Kevin Sanson (SPP), Jason Smith (SPP), Terry Oxandale (SPP), Will Tootle (SPP), Jeff Wells (GRDA), Mike Stafford (GRDA)

Op-Guide: Effective on: 10/15/2014

Expires on: 11/04/2014

I. Purpose/Background

Due to the low load and high voltage in the GRDA area, GRDA Unit #1 generation will be needed. Generation needs to be online in order to ensure voltage stability until GRDA Unit #2 returns from outage.

II. Monitoring

| IDC FG # | Monitored Element | Contingent Element | Owner | Rating (MVA) |
|----------|---------------------|--------------------|-------|--------------|
| xxxxx | GRDA area (Voltage) | System Intact | GRDA | xxx |

III. Mitigation

SPP BA will manually commit the GRDA Unit #1 (GRDA_UNIT_1) in order to provide relief from high voltage. Low load and high voltage are also contributing factors to this commitment. This requirement will be terminated once load levels permit.

If the generation from GRDA Unit #1 is unavailable, or otherwise unable to supply voltage support, reconfiguration plans may be needed. If reconfiguration is deemed necessary, GRDA will determine where to reconfiguration will be effective.

IV. Unit Commitment Details

RESOURCE NAME: GRDA_UNIT_1

Unit Start Time: 10/16/2014 00:00

Unit Online Time (Dispatchable):): **** Extension – Unit is Already Online ****

Unit Release Time (Shutdown): 11/04/2014 00:00 (This will be re-evaluated once GRDA_UNIT_2 returns to service.)

Commit Reason: SPP: LOCAL

The SPP RCs are not obligated to use the directions given above in the recommended order. Depending on the circumstances, the SPP RCs will make the decision on the best and most efficient option that would provide relief adequately.

Attachment C

March 1, 2017

United States Department of Energy
1000 Independence Ave. SW
Washington, DC 20585

Re: Contribution of GRDA Unit 1 to local grid reliability as demonstrated by recent operating experience in SPP

Dear Sir/Madam:

The Southwest Power Pool, Inc. (SPP) Reliability Coordinator (RC) has observed, historically, the need to commit GRDA Unit 1 for relief from high voltages. In fact, the RC created a Temporary Operating Guide for the period October 15 through November 4 of 2014 stating that during a planned maintenance outage of GRDA Unit 2, GRDA Unit 1 must be available for dispatch during instances of low load and high voltage. GRDA Unit 1 was called upon to provide reactive support during the entire period of the Operating Guide. Although SPP no longer requires the Temporary Operating Guide, it nevertheless continues to believe that during future light load conditions when GRDA Unit 2 is unavailable, the commitment and dispatch of GRDA Unit 1 will be a critical resource in maintaining proper system voltage. Moreover, in the absence of GRDA Unit 2 and until GRDA Unit 3 comes online, SPP believes GRDA Unit 1 provides a valuable contribution to the local area's overall grid reliability. Based on the above, SPP concurs with GRDA's assessment regarding GRDA Unit 1's importance for reliability absent other system changes or until GRDA's Unit 2 and Unit 3 are in service.

Please do not hesitate to contact me should you have questions or would like to request additional information.

Respectfully submitted,

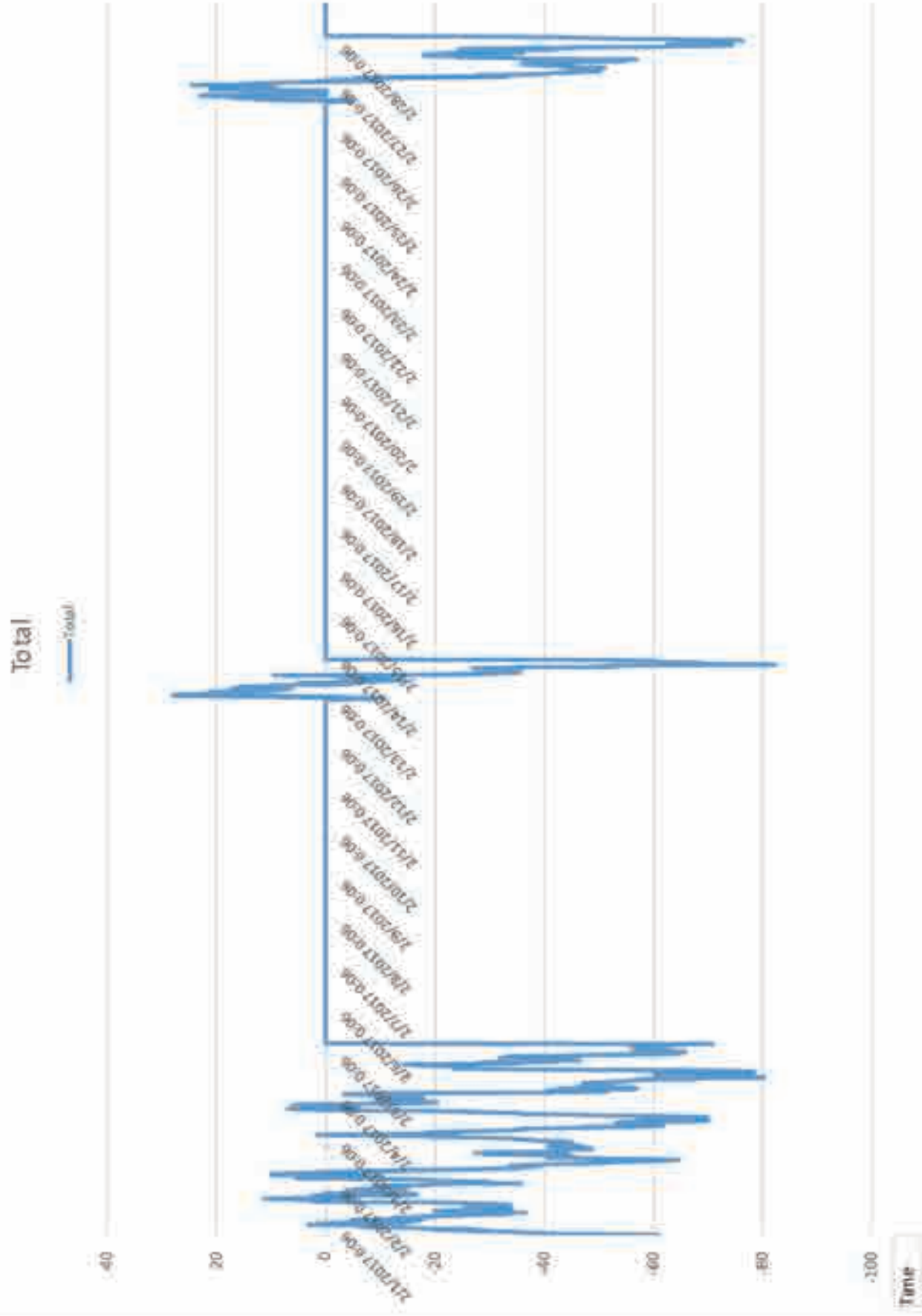
A handwritten signature in black ink that reads 'Lanny Nickell'.

Lanny Nickell
Vice President, Engineering
(501) 614-3232 • Fax: (501) 482-2022 • lnickell@spp.org

Attachment D

GRDA Unit No. 1 - Reactive Power Production in February 2017

Sum of 2-6832: MVAR GFP #1: O-GRDA #1

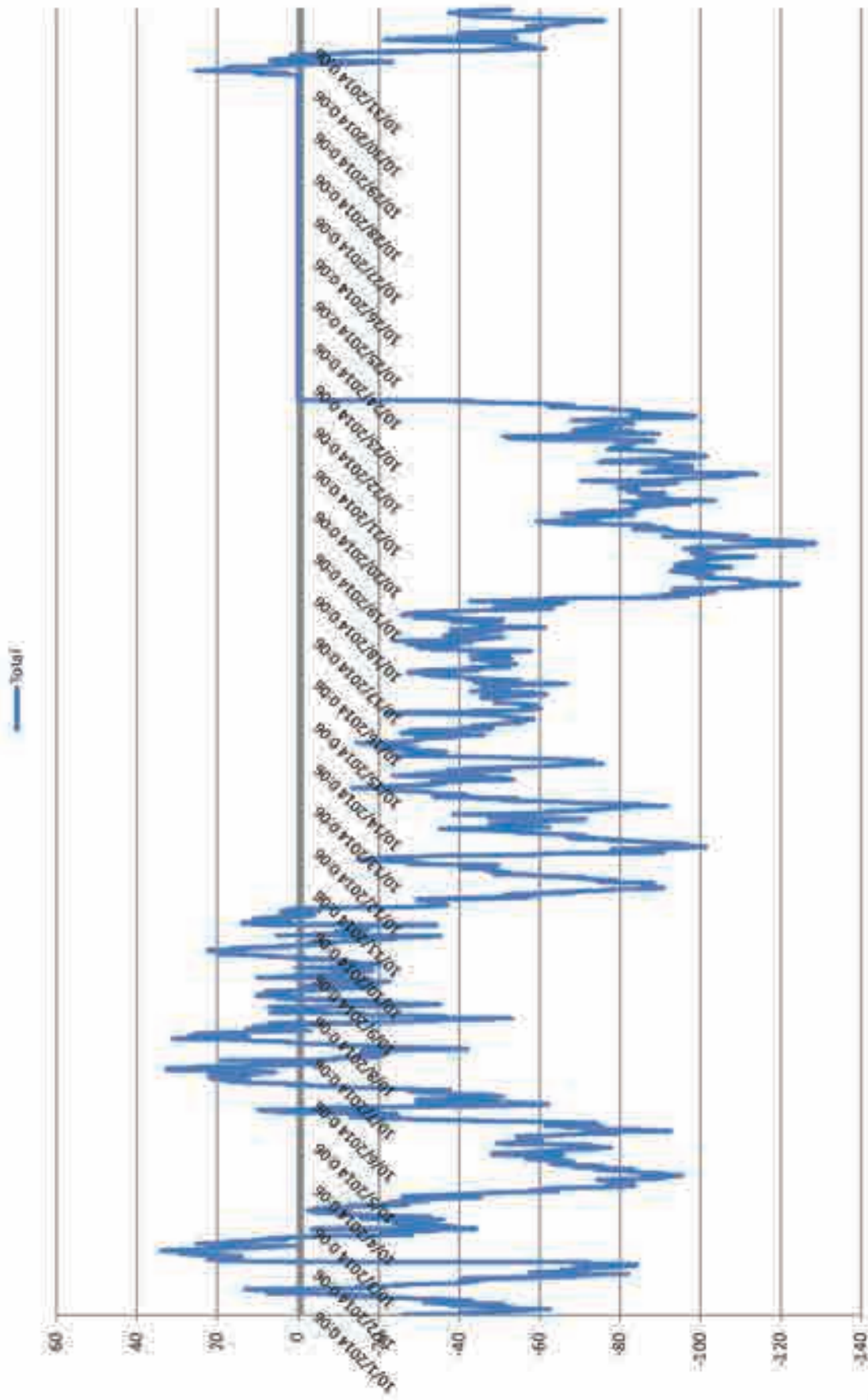


Attachment E

GRDA Unit No. 1 Reactive Power Production in October and November 2014

Sum of 2-6832: MVAR CFP #1

Total



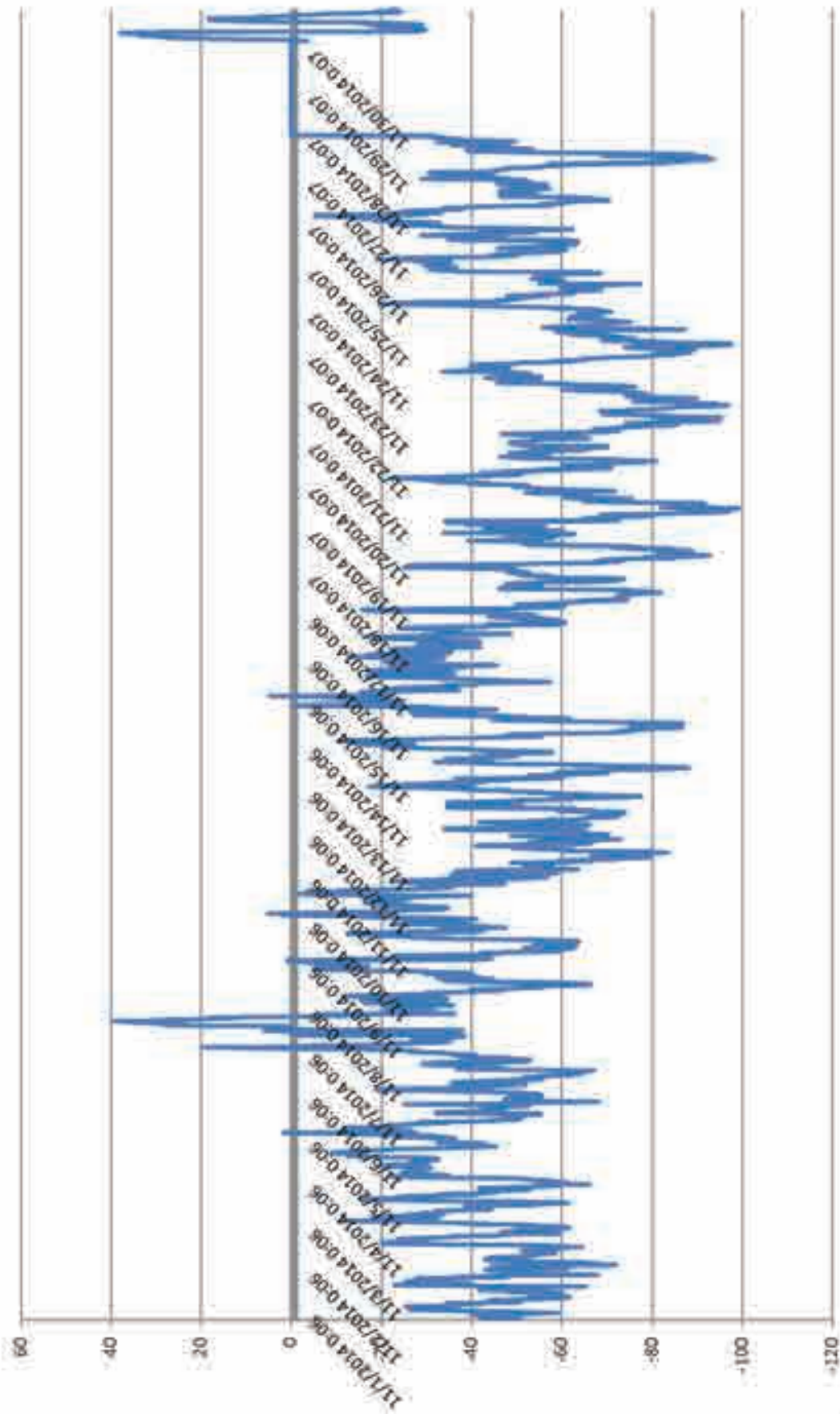
Time

GRDA Unit No. 1 Reactive Power Production in October and November 2014

Sum of 2-6832: MVAR CFP #1

Total

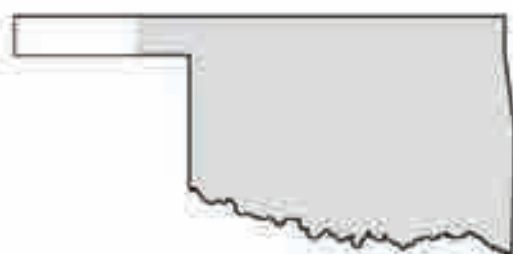
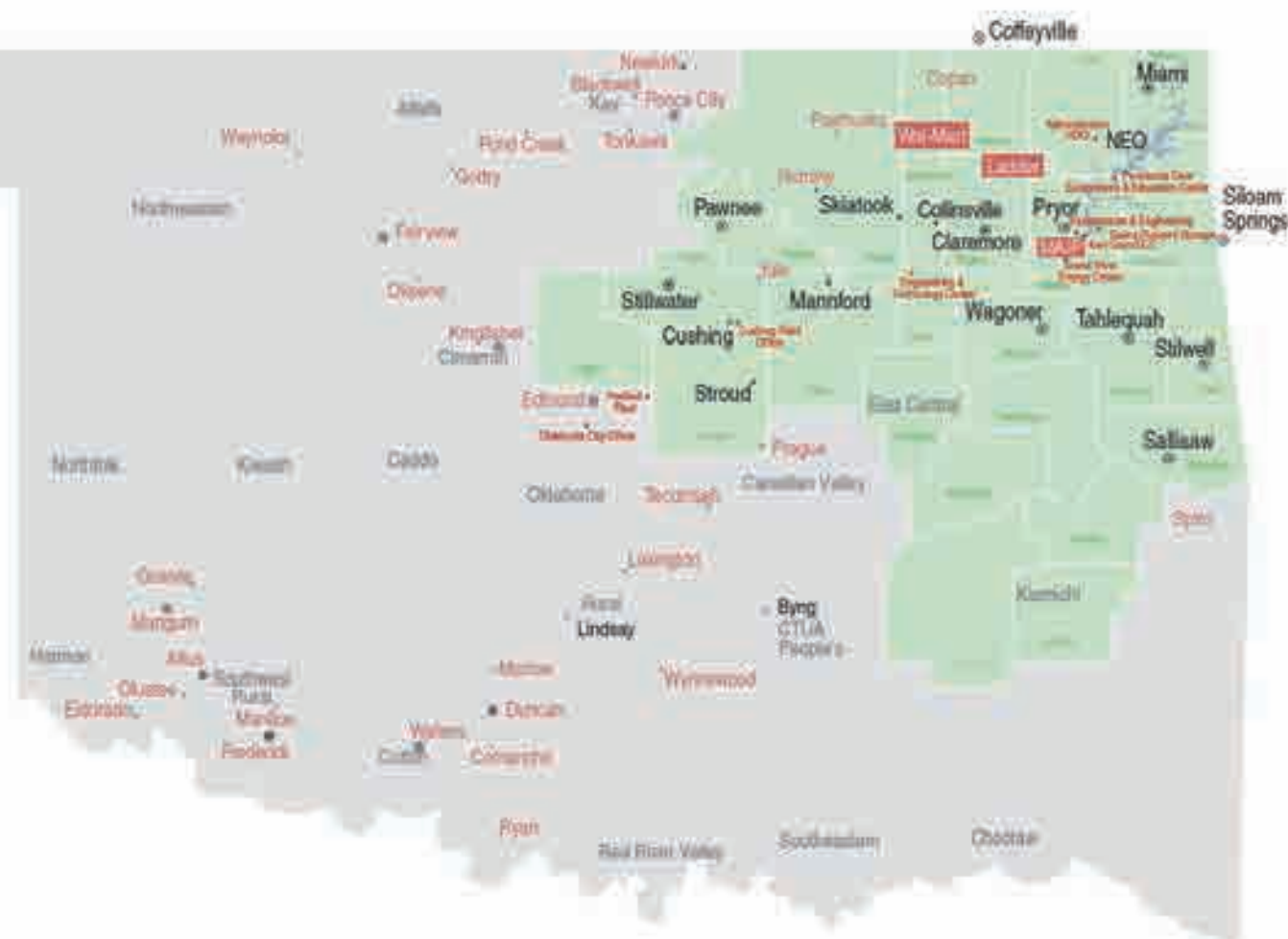
Total



Time

Attachment F

MAP OF CUSTOMERS AND GRDA FACILITIES



GRDA directly or indirectly provides electricity to some portion of all counties in Oklahoma except for two counties in the panhandle.

Municipal Customers - Served by GRDA in BLACK lettering; many served since 1940s.

Northeast Electric Cooperative - Represented by WHITE DOTs, served since 1946.

Industrial Customers - Represented by ORANGE BOX, Majority located in MidAmerica Industrial Park (MAIP).

Oklahoma Municipal Power Authority - Served since 1985. OMPA's customers in LIGHT ORANGE lettering.

Western Farmers Electric Cooperative - Served since 1983. WFEC's customers in GRAY lettering.

GRDA Facilities - Shown in RED lettering.

See Notes to Financial Statements, Utility Plant for additional information on capital assets.

Source: Grand River Dam Authority



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June 13, 2017

The Honorable James Richard Perry
Secretary of Energy
United States Department of Energy
1000 Independence Ave, SW
Washington DC 20585

**RE: Request for Emergency Order Pursuant to Section 202 (c)
of the Federal Power Act**

Dear Secretary Perry:

Pursuant to Section 202(c) of the Federal Power Act (“FPA”),¹ Section 301(b) of the Department of Energy Organization Act² and the Department of Energy’s (“DOE”) Rules of Practice and Procedure,³ PJM Interconnection, L.L.C. (“PJM”) respectfully requests the Secretary of Energy (“Secretary”) find that an electric reliability emergency exists in the North Hampton Roads area of the Commonwealth of Virginia (the “North Hampton Roads area”)⁴ that requires targeted intervention by the Secretary, in the form of a Section 202(c) emergency order, to preserve the reliability of bulk power transmission system in the North Hampton Roads area. PJM communicated to Virginia Electric and Power Company (“Dominion Energy Virginia”) PJM’s intention to seek this request, and is authorized to state that while this is not a long term solution to the

¹ 16 U.S.C. § 824a(c).

² 42 U.S.C. § § 7101 and 7151(b).

³ 16 C.F.R. §§ 205.370, 205.371 and 205.372 and 205.373.

⁴ The North Hampton Roads load area includes the following: Charles City County, James City County, York County, Williamsburg, Yorktown, Newport News, Poquoson, Hampton, Essex County, King William County, King and Queen County, Middlesex County, Mathews County, Gloucester County, the City of West Point, King George County, Westmoreland County, Northumberland County, Richmond County, Lancaster County, and the City of Colonial Beach.

reliability issues, Dominion Energy Virginia agrees with the request and will operate in accordance with an emergency order issued by the Secretary.⁵

Through this application, PJM, as the regional transmission organization (“RTO”) responsible for the reliability of the bulk power grid for a large geographic region including the Commonwealth of Virginia, seeks authorization from the Secretary allowing PJM to direct Dominion Energy Virginia to operate, and for Dominion Energy Virginia to operate as directed by PJM, the two coal-fired units (“Yorktown Units” or Yorktown Units 1 & 2”) at Dominion Energy Virginia’s Yorktown Power Station on a contingent basis for such period of time until the PJM-ordered transmission upgrades can be constructed and placed into service.⁶ Such authorization is needed to meet an emergency and serve the public interest to prevent uncontrolled power disruptions and potential shedding of critical load in the North Hampton Roads area until construction of the transmission upgrades is completed. Attachment A is a map of the North Hampton Roads area.

As detailed below, this request is limited to authorization for PJM to direct the operation of the Yorktown Units 1 & 2 when total demand for electricity for Dominion Energy Virginia exceeds certain levels to avoid impacting electric reliability and potential violations of Reliability Standards developed by the North American Electric Reliability Corporation (“NERC”) in the North Hampton Roads area. Absent such an order, residences, hospitals, military facilities, water treatment plants, and other critical facilities

⁵ The information supporting this request is provided in part by Dominion Energy Virginia.

⁶ See Appendix I for details of the PJM-ordered transmission upgrade project.

on the Virginia Peninsula may lose electric service to all or parts of their facilities due to the lack of adequate generation in the area.⁷

In accordance with FPA Section 202(c), PJM seeks this Order for a 90-day period beginning upon issuance of the Secretary's Order. Given the significant delays associated with Dominion obtaining permitting approval for the PJM-ordered transmission upgrades, PJM will request renewals of this Order on a rolling basis until the transmission project is placed into service (which is anticipated to be completed 18-20 months after all permits are issued). PJM along with Dominion Energy Virginia will provide reports to the DOE that will allow the Secretary to review past action under the order and the continued need for the emergency relief under the order at least 10 business days prior to each 90-day expiration period.⁸

I. COMMUNICATIONS

PJM designates the following persons to receive all notices and communications related to this proceeding:

⁸ Concurrent with this request, PJM has submitted a summary of this application for posting on the DOE's website as well as PJM's website. PJM requests that pursuant to FPA Section 215A(d)(10) and 18 C.F.R. Section 388.113 the information submitted in this particular application should be deemed Critical Electric Infrastructure Information ("CEII") and not publicly released.

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II. IDENTIFICATION OF APPLICANT AND DOMINION ENERGY VIRGINIA

PJM is the Regional Transmission Organization (“RTO”) comprising interconnected electric transmission systems in all or parts of Delaware, Illinois, Indiana, Kentucky, Maryland, Michigan, New Jersey, North Carolina, Ohio, Pennsylvania, Tennessee, Virginia, West Virginia and the District of Columbia.⁹ PJM is the transmission provider under, and the administrator of, the PJM Open Access Transmission Tariff (“PJM Tariff”), operates the PJM Interchange Energy Market and Capacity Credit Market, administers the Regional Transmission Expansion Planning Process (“RTEPP”),¹⁰ and controls the day-to-day operations to ensure the reliability of the high-voltage electric bulk power system of the PJM Region.

Dominion Energy Virginia is a regulated public utility that generates, transmits, and distributes electricity to retail customers within its certified service territory in Virginia and North Carolina, and sells electricity at wholesale to rural electric

⁹ See *PJM Interconnection, L.L.C.*, 81 FERC ¶ 61,257 (1997), and *PJM Interconnection L.L.C.*, 96 FERC ¶ 61,060 (2001), order on compliance filing, 98 FERC ¶ 61,072 (2002) (PJM West expansion).

¹⁰ PJM’s RTEPP identifies transmission system additions and improvements needed to keep electricity flowing to the millions in the PJM Region. RTEPP Studies are conducted that test the transmission system against mandatory national standards and PJM regional standards. These studies look 15 years into the future to identify transmission overloads, voltage limitations and other reliability standards violations. PJM then develops transmission plans in collaboration with PJM Transmission Owners to resolve violations that could otherwise lead to overloads and black-outs. This process culminates in one recommended plan – one RTEP - for the entire PJM footprint that is subsequently submitted to PJM’s independent governing Board for consideration and approval.

cooperatives, municipalities, and into the PJM wholesale markets. It is a wholly owned subsidiary of Dominion Energy, Inc., a Holding Company under the Public Utility Holding Company Act of 2005.¹¹ Dominion Energy Virginia is a transmission and generator-owning member of PJM and owns and operates approximately 21,000 MWs of generation facilities in PJM, including the coal-fired 159 MWs unit 1 and 164 MWs unit 2 at the Yorktown Power Station. Dominion Energy Virginia also owns approximately 6600 miles of transmission facilities in Virginia and integrated into PJM in 2005.

III. THE BASIS AND NEED FOR EMERGENCY RELIEF

A) Circumstances Leading to Yorktown Units Deactivation Notices

By letters dated November 11, 2011 and October 9, 2012, Dominion Energy Virginia notified PJM under Section 113.1 of the PJM Tariff of its intention to deactivate Yorktown Units effective as of December 31, 2014 (“Deactivation Notices”). The deactivation of Yorktown Units is prompted by the United States Environmental Protection Agency’s (“EPA”) Mercury and Air Toxics Standards (“MATS”) requirements¹² by April 16, 2015. The two 1-year extensions under the MATS requirements which were available under the terms of the Clean Air Act (“CAA”)¹³ have been requested, granted, and exhausted. The first extension was granted by the Virginia Department of Environmental Quality on June 24, 2014¹⁴ (effective through April 15,

¹¹ Energy Policy Act of 2005 at § 1261, Public Law 109-58, 42 USC § 7020.

¹² 40 C.F.R. Part 63, Subpart UUUUU, National Emissions Standards for Hazardous Air Pollutants: Coal and Oil Fired Electric Utility Steam Generating Units.

¹³ U.S.C. § 7413(a)(4).

¹⁴ *Compliance Extension Approval for 40 CCFR 63 Subpart UUUUU – National Emission Standards for Hazardous Air Pollutants (NESHAP) for Coal- and Oil-fired Electric Utility Steam Generating Units*, June 24, 2014, Attachment B.

2016) and a second term was authorized by the EPA under an Administrative Compliance Order on Consent (“EPA ACO”) on April 16, 2016¹⁵ (effective through April 15, 2017) pursuant to their respective authority under the Clean Air Act.

B) The Availability of Transmission Facilities During the Period of Construction of the Transmission Project will Impact the Need for the Yorktown Units.

Once all necessary permits are obtained, building the RTEP transmission project ordered by PJM will require that certain Dominion Energy Virginia transmission facilities be taken out of service for a period of time as part of the overall construction and interconnection of the transmission project. These planned transmission outages will be coordinated between PJM and Dominion Energy Virginia to ensure the reliability of service in the area and to support the construction schedule. The planned transmission outage may also require that PJM direct the running of Yorktown Units to maintain transmission system reliability. Based on PJM load flow studies of the current transmission system configuration, without factoring the planned transmission outages supporting construction of the transmission project, the Yorktown Units must be available in various configurations depending on Dominion Energy Virginia total load conditions to provide the needed energy and reactive support to keep the power grid stable in the North Hampton Roads.

1. Scenario One: The Need for the Yorktown Units when there are no transmission outages

Under conditions with all transmission facilities in-service (i.e., no planned transmission outages) and Dominion Energy Virginia total load levels [REDACTED]

¹⁵ *Administrative Compliance Order on Consent*, AED-CAA-113(a)-2016-0005, April 16, 2016, Attachment C.

██████████ ██████████, absent the availability of the Yorktown Units, PJM operators would, under certain conditions, be forced to curtail service to end use customers on the peninsula in order to maintain overall grid reliability and avoid cascading outages. DOE authority to run the Yorktown Units is needed to avoid the risk of load curtailment in these situations even in the absence of transmission outages taken as part of the construction of new PJM-ordered RTEPP transmission upgrades in the area (“Scenario One”).

2. *Scenario Two: The Need for the Yorktown Units during transmission outages to support construction of the Transmission Project*

During the construction of the PJM ordered transmission project, when transmission facilities are planned to be out of service, the Yorktown Units will be needed at lower Dominion Energy Virginia total load levels to maintain reliability and avoid risk of cascading outages and potential violations of NERC Reliability Standards in the North Hampton Roads area.

A planned sequence of transmission outages is necessary to support the transmission project. The trigger to run the Yorktown Units will be at lower load levels during the planned outages of the transmission facilities to support the RTEPP transmission project. The specific planned transmission outage condition will determine the Dominion Energy Virginia total load level at which the Yorktown Unit are required to run to maintain reliability. Specifically, with no transmission outage, the Yorktown Units are not needed until Dominion Energy Virginia total load reaches ██████████

██████████ When a ██████████ is out for construction, for

example, a Yorktown generator will be needed when Dominion Energy Virginia total load reaches approximately [REDACTED].¹⁶

C) Emergency Relief Needed Until the PJM-Ordered Transmission Project is Placed in Service to Avoid Loss of Electric Service

PJM has appropriately limited this request by only seeking the authority to run the Yorktown Units when:

- a. needed to avoid loss of electric service in North Hampton Roads area;
- b. when certain total Dominion Energy Virginia load levels are reached; and
- c. only until the PJM ordered RTEPP transmission project is placed in service.

Without the authorization to operate the Yorktown Units, a temporary “remedial action scheme” or “RAS” could be implemented in Newport News, Hampton, Poquoson, and York County in the North Hampton Roads area. The RAS is an automated controlled load shed scheme that would cut electric service on the Virginia Peninsula in a manner designed to avoid cascading outages. At the PJM Planning Committee on January 12, 2017, Dominion Energy Virginia presented the “North Hampton RAS” to mitigate the cascading outage issues seen with the Yorktown Units’ deactivations.

PJM load flow studies indicate that generation from the Yorktown Units will be needed under normal system conditions when Dominion Energy Virginia total load is above approximately [REDACTED] MW with no transmission outages. Without the support of the Yorktown Units, it is will be necessary to arm the RAS for implementation to prevent the possibility of uncontrolled power disruptions in the North Hampton Roads [REDACTED]

¹⁶ Other examples of running the Yorktown Units at different Dominion Energy Virginia total load levels concurrent with planned transmission outages to ensure reliability are shown in Appendix III.

[REDACTED]

[REDACTED]¹⁷

It is not unusual for total customer load for Dominion Energy Virginia to exceed [REDACTED] during peak customer demand conditions, typically during the summer and/or winter months. Dominion Energy Virginia exceeded [REDACTED] in each of the past five years for a total of [REDACTED] hours and is expected to exceed it again in both 2017 and 2018.

Under the RAS plan controlled power interruptions to approximately 950 MWs of load during peak periods including over 150,000 customers in Newport News, Hampton, Poquoson, and York County will be implemented to maintain grid reliability. The table below represents the number of customers potentially affected by the RAS, and the number of accounts in each special condition category, some of which represent critical facilities on the Peninsula.

| | Total Customers | TRANSMISSION/ PRIMARY DELIVERY | HOSPITALS | LARGE MILITARY BASES AND POSTS | EMERGENCY OPER CENTERS, 911, FIRE, POLICE & RESCUE SQUADS | WATER/MAJOR SEWAGE TREATMENT | CENTRAL TELECOM FACILITIES | TUNNELS, WMATA, MAJOR AIRPORTS |
|------------------------|--------------------|--------------------------------------|-----------|---|---|------------------------------------|----------------------------------|---|
| Remedial Action Scheme | 169,809 | 5 | 8 | 4 | 55 | 30 | 15 | 4 |

Under Scenario One, during peak load periods, with no planned transmission outages and with the loss of [REDACTED], rotating outages may be necessary in the Virginia Peninsula. A detailed load shed plan has been developed for this scenario. Distribution circuits on the Virginia Peninsula have been

¹⁷ The North Hampton RAS will be armed for implementation based on total load conditions. Upon loss of certain facilities, the scheme will trip the remaining feeds to the Yorktown area which sheds electric service to customers to prevent voltage collapse. The North Hampton RAS is temporary and will allow the outages for the remaining transmission system upgrades to proceed reliably.

prioritized, and the table below represents the number of customers in each priority grouping that may be affected by rotating outages if controlled load shed scenarios arise (e.g. “W” is lowest priority and represents primarily residential customers; “Z” is highest priority and represents facilities such as hospitals, 911 centers, and water treatment plants.) Under Scenario Two, during peak load periods with planned transmission outages, a similar load shed plan would be implemented on the Virginia Peninsula.

| Priority | Total Customers | TRANSMISSION/ PRIMARY DELIVERY | HOSPITALS | LARGE MILITARY BASES AND POSTS | EMERGENCY OPER CENTERS, 911, FIRE, POLICE & RESCUE SQUADS | WATER/MAJOR SEWAGE TREATMENT | CENTRAL TELECOM FACILITIES | TUNNELS, WMATA, MAJOR AIRPORTS |
|----------|-----------------|-----------------------------------|-----------|--|---|------------------------------------|----------------------------------|---|
| W | 38,255 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| X | 123,792 | 1 | 0 | 1 | 34 | 11 | 15 | 5 |
| Y | 15,136 | 3 | 0 | 2 | 10 | 5 | 4 | 0 |
| Z | 37,012 | 2 | 11 | 3 | 21 | 24 | 3 | 3 |

Other than the Yorktown Units, the generation available to support electric service in the North Hampton Roads area of the Virginia Peninsula is very limited (See Appendix II for details on such generation).

IV. LEGAL BASIS FOR PETITION

Under FPA Section 202(c) (“Temporary connection and exchange of facilities during emergency”) the Secretary is empowered “whenever [he] determines that an emergency exists by reason of a sudden increase in the demand for electric energy, or a shortage of electric energy or of facilities for the generation or transmission of electric energy, or of fuel or water for generating facilities, or other causes, ... to require by order such temporary connections of facilities and such generation, delivery, interchange, or

transmission of electric energy as in [his] judgment will best meet the emergency and serve the public interest.”¹⁸

PJM respectfully submits the information above and the request for relief below satisfies the requirements of FPA Section 202(c) (1), (2), (3) and (4) and the procedures in the DOE’s regulations, 16 C.F.R. § 205.373 (“Application Procedures”). Attached hereto as Appendix III and Appendix IV is additional information required by the Application Procedures and DOE requested additional requirements for this emergency relief application.

This request for emergency relief is supported by recent past precedent. On April 14, 2017, the Secretary issued Order No. 202-17-1 under Section 202 (c) of the FPA. In that order, the Secretary determined that an emergency exists in Oklahoma due to a shortage of Electric energy, a shortage of facilities for the generation of electric energy, and other causes. The Grand River Dam Authority (“GRDA”) requested emergency relief to allow three coal-fired generators in Oklahoma to operate beyond their MATS requirements following the expiration of the second of two one-year extensions. GRDA’s application was supported from Southwest Power Pool (“SPP”).¹⁹ In that case, the Secretary granted the request and directed the coal units to operate in the event that SPP determines that generation is needed to maintain grid reliability.

¹⁸ In 2016, Congress passed the FAST Act which clarified the breadth of the statute; indicated that the Secretary’s emergency actions can include temporarily suspending operation of specific environmental regulations to the extent application of those regulations was causing or contributing to the emergency; and clarified that the Secretary can act without public notice or the requirements of a formal notice and comment period.

¹⁹ SPP is a Federal Energy Regulatory Commission approved RTO.

V. REQUESTED RELIEF

PJM respectfully requests the Secretary issue an order pursuant to FPA Section 202(c) temporarily permitting PJM to direct Dominion Energy Virginia to operate, and for Dominion Energy Virginia to operate, Yorktown Units 1 & 2 to prevent uncontrolled power disruptions and shedding of critical load in the North Hampton Roads area until construction of the transmission project is completed.

Dominion Energy Virginia has represented to PJM that it will employ all reasonable efforts to comply with all Federal, state and local environmental laws and regulations.²⁰ It is PJM's and Dominion Energy's understanding that pursuant to Section 202(c) as recently amended in the FAST Act,²¹ PJM's direction to operate, and Dominion Energy Virginia's operation of the Yorktown Units in accordance with a DOE order issued pursuant to FPA Section 202(c) will result in emissions but such emissions shall not be considered a violation of any federal, state and local environmental laws or regulations or subject PJM or Dominion Energy Virginia to any requirement, civil or criminal liability, or a citizen suit under such environmental laws or regulations.²² In addition to operations during dispatch, emissions will occur during startup, shutdown, and basic, periodic and compliance related activities consistent with normal operating procedures and good engineering practices to ensure the units remain reliable and capable of operating when necessary. These activities include, but are not limited to, operating equipment for maintenance testing and reliability check out, testing of fuel systems,

²⁰ See Appendix V which identifies such Federal, state and local environmental laws and regulations.

²¹ Pubic Law No. 114-94 amending FPA Section 202(c).

²² FPA Section 202(c)(3).

tuning of units, required emissions or operational testing, and emptying of coal bunkers. Without the ability to perform these activities Dominion may not be prepared to run the Yorktown Units when directed by PJM.

VI. PROPOSED DURATION OF REQUESTED RELIEF

It is anticipated the PJM ordered RTEPP transmission project will take approximately 18-20 months after receipt of all applicable permits and authorizations to be completed and placed into service.

Given the extended nature of the emergency, PJM proposes to submit requests for renewals of the Secretary's emergency order for successive 90 day periods provided PJM and Dominion Energy Virginia submits status reports at least 10 business days prior to the end of the initial 90 day period and each successive 90 day renewal period on the status of operation of the Yorktown Units, the level of operation and emissions from the Yorktown Units over the prior period and the status of the construction of the transmission line project.

The order would also place PJM and Dominion under an affirmative obligation to notify the Secretary of any changes to the circumstances which gave rise to the emergency. Absent a demonstration of changed circumstances, PJM proposes the Secretary's Order 'roll over' for subsequent 90-day periods. PJM expects its status reports to be available on the DOE website and transparent to the public so all stakeholders can gauge the progress of the project as well as the steps Dominion Energy Virginia has taken during this period to limit emissions from Yorktown Units. PJM will similarly be posting its filing with the Secretary on the PJM website. These steps will ensure compliance with the requirements of FPA Section 202(c) (2) and (4) which apply

when such an order issued potentially conflicts with environmental laws and regulations including the need to “minimize any adverse environmental impacts to the extent practicable.”

VII. OPERATING CONDITIONS AND MITIGATION

Under Scenario Two, PJM will direct Dominion Energy Virginia to operate the Yorktown Units during construction of the transmission project in order to ensure continued system reliability. Dependent on when the outages will be permitted to start, PJM expects that construction of the transmission project and the associated outages of existing facilities could require at least one unit operating about [REDACTED] of the time during the anticipated 18–20 month construction timeline. The second unit will need to be ready if the first unit is not available or if local load and transmission conditions require additional generation. Under Scenario One, PJM anticipates that the Yorktown Units will be needed at total Dominion Energy Virginia peak loads above [REDACTED] for local area transmission system support. PJM expects such peak load to occur during months of January, February, May, June, July, August, and/or September based on historic days of high load and periods of time when emergency generation has been required.

As a result of these identified reliability requirements, PJM and Dominion Energy Virginia will work together to establish a dispatch methodology that operates the Yorktown Units when called upon for reliability issues associated with the transmission project, as well as for other expected and actual local area transmission issues or generation emergencies. The Yorktown Units could be required to operate above or below the estimates provided above, depending on the results of power flow studies. Given the often unforeseen circumstances that can arise in the event of grid instability,

PJM believes such flexibility for operating the Yorktown Units is needed to address reliability during the period until the required transmission project is completed.

VIII. CONCLUSION AND REQUESTED RELIEF

PJM respectfully requests that the Secretary grant this Petition and order the temporary generation of Yorktown Units 1 & 2 to alleviate the emergency described hereinabove. Specifically, PJM seeks an Order of the Secretary under Section 202(c) which provides: PJM shall direct the operation, and Dominion Energy Virginia shall operate, Yorktown Units 1 & 2 only as needed in order to address NERC reliability issues or for other local area transmission issues. Dominion Energy Virginia shall implement a dispatch methodology with PJM that operates Yorktown Units 1 & 2 only when called upon for NERC reliability issues or for other local area transmission issues.

Respectfully submitted,

/s/ Steven R Pincus

Craig Glazer
VP, Federal Government Policy
PJM Interconnection, L.L.C.

Steven R. Pincus
Associate General Counsel
PJM Interconnection, L.L.C.

Dated: June 13, 2017

APPENDIX I

Description of PJM-Order Transmission Project

A) Background

By letters dated December 14, 2011 and April 11, 2014, PJM notified Dominion Energy Virginia under Section 113.2 of the Tariff that the deactivation of Yorktown Units 1 & 2 respectively would adversely affect the PJM transmission system absent the installation of certain transmission upgrades (“the Reliability Impact Letters” copies of which are attached as Attachment D and Attachment E). In the Reliability Impact Letters, PJM described the reliability impacts resulting from the proposed deactivation and provided an estimated deadline of the first quarter of 2016²³ for completion of transmission upgrades necessary to address the reliability impacts. PJM included the required transmission upgrade in the PJM RTEPP approved by the PJM Board of Managers on May 17, 2012.

The PJM RTEP project (b1905)²⁴ comprises among other things a new 500 kV transmission line across the James River. Pursuant to the PJM Operating Agreement, on November 19, 2012, PJM notified Dominion Energy Virginia to begin construction of the Skiffes Creek Transmission Project. The schedule objective was intended to align completion of the transmission project prior to the deadline for compliance by Yorktown Units 1 & 2 with EPA’s MATS requirements. However, construction was significantly delayed by interventions in the U.S. Army Corps of Engineer’s permitting process.

The Skiffes Creek Transmission Project was reviewed with all stakeholders as part of PJM’s public RTEP process where the need and proposed electrical location of the line was considered and the lack of alternatives explained. Moreover, Dominion Energy Virginia engaged in state public hearings in Richmond and Williamsburg in the Commonwealth of Virginia’s siting proceeding before the Virginia State Corporation Commission (“SCC”) in Case No. PUE-2012-00029.²⁵ The U.S. Army Corps of Engineer’s permitting process also included a public hearing in Williamsburg on October 30, 2015. Thus, given the nature of the emergency, the previous reviews of the need for the project through a public process and the lack of suitable short term alternatives, PJM respectfully submits there is no need for additional public hearings or comments for the Secretary to issue the FPA Section 202(c) emergency order requested herein.

²³ The December 14, 2011 letter for the Yorktown Units estimated a deadline of June 2015 to complete the reliability upgrades, which was extended when PJM issued the April 11, 2014 letter for the Yorktown Units which estimated a deadline of fourth quarter 2016 to complete the reliability upgrades.

²⁴ The Skiffes Creek Transmission Project.

²⁵ The SCC held a public hearing in Williamsburg on October 24, 2012, and held public hearings in Richmond on January 10, 2013; April 9-12, 2013; April 15, 2013; April 18, 2013; and January 30, 2014. Public witnesses and intervenors had full opportunity to present testimony and argue for alternatives to the proposed transmission project. The SCC granted a Certificate of Public Convenience and Necessity to construct the Skiffes Creek Transmission Project by orders dated November 26, 2013 and February 28, 2014.

Dominion Energy Virginia notified PJM by letter dated May 2, 2014, in accordance with Section 113.2 of the PJM Tariff it intended to continue operating Yorktown Units 1 & 2 through the earlier of the first quarter of 2016 or the Skiffes Creek Transmission Project completion date which was, at that time, intended to be in service prior to the last available extension under the MATS rule. Dominion Energy Virginia subsequently sent PJM letters on September 5, 2014, June 1, 2015, and March 30, 2016, notifying PJM it would extend the projected retirement date for Yorktown Units 1 & 2 to the earlier of Spring 2017 or the date of the Skiffes Creek Transmission Project completion; however those extensions were limited by the final date for compliance with the MATS rule.²⁶

The Skiffes Creek Transmission Project is anticipated to take approximately 18-20 months after receipt of all applicable permits and authorizations to complete. Significant permitting delays at the federal level have prevented Dominion Energy Virginia from commencing with construction of the Skiffes Creek Transmission Project. Due to the identified reliability impacts, Dominion Energy Virginia has continually deferred the date that Yorktown Units 1 & 2 would be deactivated.²⁷

B) If Permitted, the Availability of Transmission Facilities During the Period of Construction of the Skiffes Creek Transmission Project will Impact the Need for the Yorktown Units

Once all necessary permits are obtained, building the Skiffes Creek Transmission Project will require that certain Dominion Energy Virginia transmission facilities be taken out of service for a period of time as part of the overall construction and interconnection of the Skiffes Creek Transmission Project. These planned transmission outages will be coordinated between PJM and Dominion Energy Virginia to ensure the reliability of service in the area and to support the construction schedule. The planned transmission outage may also require that PJM direct the running of the Yorktown Units to maintain transmission system reliability. Based on PJM load flow studies of the current transmission system configuration, without factoring the planned transmission outages supporting the Skiffes Creek Transmission Project, the Yorktown Units must be available in various configurations depending on certain total load conditions to provide the needed energy and reactive support to keep the power grid stable in the North Hampton Roads area on the Virginia Peninsula.

²⁶ Given that the Yorktown Units are approximately 60 years old, after extensive analysis Dominion determined that retrofitting the Yorktown Units 1 & 2 to comply with environmental regulations, including the MATS rule, was not a viable alternative to the Skiffes Creek Transmission Project. Retrofitting the Yorktown Units would be prohibitively expensive, take too long to permit and construct, and not maintain long-term NERC compliance of the transmission system.

²⁷ Yorktown Units 1 & 2 operated under EPA ACO that ended April 15, 2017.

APPENDIX II

Other Generation Available on the Virginia Peninsula

Dominion Energy Virginia owns and operates in North Hampton Roads area of the Virginia Peninsula and the oil-fired at the Yorktown Power Station (“Yorktown Unit 3”). While Yorktown Unit 3 with a capacity of 789 MW could, in theory, be available at higher load conditions, Yorktown Unit 3 has limitations which prevent PJM from relying on that unit consistently and for extended periods of time. Yorktown Unit 3 has experienced a significantly high outage rate in the past and is operating pursuant to a capacity factor limitation to comply with MATS under the rule’s limited use oil-fired unit provisions defined in 40 CFR 63.10042. These provisions limit Unit 3’s annual capacity factor when burning oil to less than 8 percent of its maximum capacity or nameplate heat input, whichever is less, averaged over a 24 month block contiguous period, the first of which commenced on May 1, 2015, (the first of the month following the compliance date specified in the MATS rule at 40 CFR 63.9984 (April 16, 2015). Exceeding the 8 percent capacity factor limitation would subject the unit to stringent emission limits for particulate matter, mercury, hydrogen chloride and hydrogen fluoride that would require extensive and costly retrofit pollution controls.

Other than the Yorktown Units, PJM has approximately 14 MW of PJM Demand Response available on the peninsula and Dominion Energy Virginia has about 20 MW of Demand Side Management capability on the peninsula in the form of remote air-conditioning control as well as the ability to curtail a large industrial customer an average of 75 MWs for transmission emergencies. The air conditioning control is limited to a total of 120 hours and for 30 days during the summer months. Thus while PJM and Dominion Energy Virginia have a very limited amount of demand response available on the peninsula, it is not sufficient to ensure reliable service.

APPENDIX III
16 C.F.R. §§ 205.373 Application Procedures

(a) The exact legal name of the applicant and of all other “entities” named in the application.

See petition.

(b) The name, title, post office address, and telephone number of the person to whom correspondence in regard to the application shall be addressed.

See petition.

(c) The political subdivision in which each “entity” named in the application operates, together with a brief description of the area served and the business conducted in each location.

See petition.

(d) Each application for a section 202(c) order shall include the following baseline data:

(1) Daily peak load and energy requirements for each of the past 30 days and projections for each day of the expected duration of the emergency;

The Yorktown Units are required to control projected transmission constraints and to support transmission outages associated with the Skiffes Creek Transmission Project. The constrained facilities will be required to transfer energy to serve load until the Skiffes Creek Transmission Project upgrades are completed.

During peak load conditions with no transmission outage, Yorktown generation is needed at Dominion Energy Virginia load levels above approximately [REDACTED]. A series of transmission outages are necessary to support the Skiffes Creek Project to construct a new 230 kV line from the Skiffes Creek switching station to the Whealton substation. The specific outage conditions will determine the Dominion Energy Virginia zonal load level at which Yorktown generation is required to maintain reliability. When a [REDACTED] Yorktown generation will be needed when Dominion Energy Virginia load reaches approximately [REDACTED]. The following table contains Yorktown 1 & 2 run time estimates for an outage sequence starting in the summer of 2017, which is dependent upon the issuance of the Army Corps of Engineers permit:

| Outage | Scheduled Outage Duration | Limiting Contingency | Load Threshold | Estimated Run Time (Summer Start) |
|--------|---------------------------------|----------------------|-------------------|--|
|--------|---------------------------------|----------------------|-------------------|--|

| | | | | |
|------------|--|--|--|--|
| [REDACTED] | | | | |
|------------|--|--|--|--|

The following table summarizes the history of Dominion Energy Virginia load levels above [REDACTED], which would require Yorktown generation to control transmission overloads with all lines in service.

| | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|------|------|------|------|------|
| # of days Dominion Energy Virginia load exceeded [REDACTED] MW | 1 | 1 | 1 | 2 | 2 |
| # of hours Dominion Energy Virginia load exceeded [REDACTED] MW | 2 | 2 | 2 | 2 | 2 |

(2) All capacity and energy receipts or deliveries to other electric utilities for each of the past 30 days, indicating the classification for each transaction;

Not Applicable.

(3) The status of all interruptible customers for each of the past 30 days and the anticipated status of these customers for each day of the expected duration of the emergency, assuming both the granting and the denial of the relief requested herein;

Currently, approximately 14 MW of PJM Demand Response is available in the in the North Hampton Roads area on the Virginia Peninsula. Since usage is limited, PJM will only implement DR as needed post-contingency to restore customer load.

Currently, Dominion Energy Virginia has about 20 MW of Demand Side Management capabilities in the peninsula in the form of remote air-conditioning control as well as the ability to curtail a large industrial customer up to 75 MWs for transmission emergencies. This air conditioning control is limited to a total of 120 hours and for 30 days during the summer months. Dominion Energy Virginia will reserve this capability for the highest need days to reduce load in the North Hampton Roads area on the Virginia Peninsula.

(4) All scheduled capacity and energy receipts or deliveries to other electric utilities for each day of the expected duration of the emergency.

Not Applicable. PJM is a single Balancing Authority, and as such performs a single Security Constrained Economic Dispatch to economically dispatch generation to service Dominion Energy Virginia load. However, the Yorktown Units are required to control projected transmission constraints and to support transmission outages associated with the Skiffes Creek Transmission Project.

(e) A description of the situation and a discussion of why this is an emergency, including any necessary background information. This should include any contingency plan of the applicant and the current level of implementation.

See petition.

(f) A showing that adequate electric service to firm customers cannot be maintained without additional power transfers.

PJM's analysis follows the requirements set out by NERC Reliability Standard TPL-001-4 - Transmission System Planning Performance Requirements. Requirement R2 refers to specific planning events listed in Table 1 – Steady State & Stability Performance Planning Events categorized as P0 through P7. Additional details are contained in Appendix III Response 1.

(g) A description of any conservation or load reduction actions that have been implemented. A discussion of the achieved or expected results or these actions should be included.

See response to item d(3) above.

(h) A description of efforts made to obtain additional power through voluntary means and the results of such efforts; and a showing that the potential sources of power and/or transmission services designated pursuant to paragraphs (i) through (k) of this section informed that the applicant believed that an emergency existed within the meaning of § 205.371.

Not applicable.

(i) A listing of proposed sources and amounts of power necessary from each source to alleviate the emergency and a listing of any other "entities" that may be directly affected by the requested order.

There are no other impacted entities. There are a limited number of transmission facilities serving the Dominion Energy Virginia load within the North Hampton area on the Virginia Peninsula.

(j) Specific proposals to compensate the supplying "entities" for the emergency services requested and to compensate any transmitting "entities" for services necessary to deliver such power.

On January 5, 2017, Dominion Energy Virginia filed with the Federal Energy Regulatory Commission ("FERC") Deactivation Avoidable Cost ("DAC") Rates for the Yorktown Units pursuant to Section 116 of the PJM Tariff (FERC Docket No. ER17-750-000). The DAC Rate filing was accepted by FERC letter order issued on March 2, 2017.

(k) A showing that, to the best of the applicant's knowledge, the requested relief will not unreasonably impair the reliability of any "entity" directly affected by the requested order to render adequate service to its customers.

No entity will be adversely impacted.

(l) Description of the facilities to be used to transfer the requested emergency service to the applicant's system.

The Yorktown Units are required to control projected transmission constraints and to support transmission outages associated with the Skiffes Creek Transmission Project. The constrained facilities will be required to transfer energy to serve load until the Skiffes Creek Transmission Project is completed.

(1) If a temporary interconnection under the provisions of section 202(c) is proposed independently, the following additional information shall be supplied for each such interconnection:

Not Applicable

- (i) Proposed location;*
 - (ii) Required thermal capacity or power transfer capability of the interconnection;*
 - (iii) Type of emergency services requested, including anticipated duration;*
 - (iv) An electrical one line diagram;*
 - (v) A description of all necessary materials and equipment; and*
 - (vi) The projected length of time necessary to complete the interconnection.*
- (2) If the requested emergency assistance is to be supplied over existing facilities, the following information shall be supplied for each existing interconnection:*

Not Applicable.

- (i) Location;*
 - (ii) Thermal capacity of power transfer capability of interconnection facilities; and*
 - (iii) Type and duration of emergency services requested.*
- (m) A general or key map on a scale not greater than 100 kilometers to the centimeter showing, in separate colors, the territory serviced by each "entity" named in the application; the location of the facilities to be used for the generation and transmission of the requested emergency service; and all connection points between systems.*
- (n) An estimate of the construction costs of any proposed temporary facilities and a statement estimating the expected operation and maintenance costs on an annualized basis. (Not required on section 202(d) applications.)*

APPENDIX IV
Yorktown Units 1 & 2 Extension – DOE Filing Requirements

In addition to the filing requirements specified in DOE's regulations at 10 CFR 205.370 through 205.379, please include as much of the following information as is applicable to your organization's circumstances:

1. *Specific scenarios under which non-operation of the facilities at issue would lead to FERC/NERC reliability standard violations and identify the reliability standard(s) that would be violated.*

PJM's Planning Division performed a study of the 2017 summer Transmission System to understand the system conditions expected given the delays in completing the required transmission system upgrades along with the impending deactivation of the Yorktown Units on April 15, 2017.

PJM's analysis follows the requirements set out by NERC Reliability Standard TPL-001-4 - Transmission System Planning Performance Requirements. Requirement R2 refers to specific planning events listed in a common "Steady State & Stability Performance Planning Events" table. The specific scenarios in which planning performance requirements for steady-state were not met are:

**NERC Category P6 (Multiple Contingency – 2 overlapping single contingencies)
- Thermal and Voltage study:**





**NERC Category P7 (Multiple Contingency – Common Structure) - Common
mode outage & Generation Deliverability Study**



The following map depicts the transmission lines referenced above.



2. *All contingency analyses, including N-1, N-2, etc. Provide all the load flow models used to perform the studies.*

Contingency analyses that identified planning issues are listed in the response to Question 1 above. The load flow model provided in an attachment is a summer 2017 representation.

With the current system configuration, i.e. no transmission outages to support the Skiffes Creek Transmission Project, PJM load flow studies indicate that Yorktown generation or arming the RAS will be necessary when Dominion Energy Virginia total load is above approximately [REDACTED]. The mitigation measure is needed to prevent the possibility of uncontrolled power disruptions in the North Hampton area on the Virginia Peninsula due a tower contingency loss of [REDACTED].

[REDACTED] Dominion Energy Virginia total load exceeded approximately [REDACTED] in each of the past five years and is expected to exceed it again in 2017 and 2018.

| | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|------|------|------|------|------|
| # of days Dominion Energy Virginia load exceeded [REDACTED] MW | █ | █ | █ | █ | █ |
| # of hours Dominion Energy Virginia total load exceeded [REDACTED] MW | █ | █ | █ | █ | █ |

3. *Contingency reserve obligations, if any, including the following information:*

- a. *Contingency reserve policies, including the minimum reserve requirement for any group and its members involving the facilities at issue.*

Not Applicable. PJM is a single Balancing Authority; there is no need to secure reserves specific to the North Hampton area on the Virginia Peninsula.

- b. *The permissible mix of operating reserve, spinning and operating reserve, and supplemental reserve that may be included in contingency reserve.*

See response to item 3a above.

- c. *The procedure for applying contingency reserve.*

See response to item 3a above.

4. *Historical values of the facilities at issue (run time including days and hours, amount of MWh) for the past three years for all seasons.*

| Total Run Time and Net MWh | | | | | | | | | |
|----------------------------|------------|----------|---------|------------|----------|---------|------------|----------|---------|
| Year | Yorktown 1 | | | Yorktown 2 | | | Yorktown 3 | | |
| | Run Hours | Run Days | Net MWh | Run Hours | Run Days | Net MWh | Run Hours | Run Days | Net MWh |
| 2014 | 3455 | 144 | 417996 | 3871 | 161 | 473232 | 325 | 14 | 101018 |
| 2015 | 1162 | 48 | 136115 | 962 | 40 | 104968 | 640 | 27 | 248292 |
| 2016 | 404 | 17 | 38892 | 2122 | 88 | 277498 | 366 | 15 | 97052 |

5. Studies for the near-term and long-term transmission planning horizons:
 - a. For the stability portion, the contingency analyses. Studies must assess the impact of the extreme events.
 - b. For transient voltage response, the criteria that shall at a minimum, specify a low-voltage level and a maximum length of time that transient voltages may remain below that level.
 - c. The criteria or methodology used in the analysis to identify system instability for conditions such as cascading, voltage instability, or uncontrolled islanding.

PJM Planning's deactivation analysis consists of a steady-state thermal and voltage evaluation on a near-term planning horizon case that represents the year in which the generator requests deactivation. In the case of Yorktown Units, the original deactivation date of December 31, 2014 was revised to April 15, 2017. The analysis presented here was performed on a summer 2017 case (see answer to Appendix III Question 1). PJM does not perform stability analysis as part of its deactivation evaluation since there will be no stability issues resulting from the generation retirement.

6. *Emission/discharge estimates, if the operation of the facilities at issue may result in noncompliance with any environmental law or regulation, for worst- (maximum output of the unit), medium-, and best-case scenarios for all four seasons. Specify the relevant environmental law or regulation.*
 - EPA's MATS requirements for Yorktown Units 1&2 set forth in 40 CFR Part 63, Subparts A and UUUUU.²⁸

See Attachment F.

7. *Plans for reactive power support.*

There are capacitor banks in the area providing static reactive power support. However, not all the capacitor banks can be switched into service due to the high voltage limits. PJM does not depend on out-of-service capacitor banks to provide mitigation for post-contingency low voltage violations, rather PJM relies on dynamic MVAR support, which is provided by Yorktown Generation. The Yorktown Units provides reactive power support when they are online.

²⁸ In addition to operations during dispatch, emissions will occur during startup, shutdown, and basic, periodic and compliance related activities consistent with normal operating procedures and good engineering practices to ensure the units remain reliable and capable of operating when necessary. These activities include, but are not limited to, operating equipment for maintenance testing and reliability check out, testing of fuel systems, tuning of units, required emissions or operational testing, and emptying of coal bunkers.

8. *Remedial action scheme and plans to mitigate operating emergencies for insufficient generating capacity.*

Remedial Action Scheme (“RAS”) was created as a temporary stopgap to maintain compliance with TPL standard and permit outages to proceed reliably.

At the PJM Planning Committee on January 12, 2017, Dominion Energy Virginia presented a new remedial action scheme: “North Hampton RAS” to mitigate the issues seen with the Yorktown Unit deactivations. The North Hampton RAS is necessary to maintain reliability and compliance with the TPL-001-4 standard when the Yorktown Units deactivate on April 15, 2017, and the required transmission system upgrades will not be in service. The North Hampton RAS is armed based on load conditions. Upon loss of certain facilities, the scheme will trip the remaining feeds to the North Hampton area on the Virginia Peninsula which sheds load to prevent voltage collapse. The North Hampton RAS is temporary and will allow the outages for the remaining transmission system upgrades to proceed reliably. It will be removed upon commissioning of all of the required transmission system upgrades.

9. *Short-term and long-term schedules for both the generating unit and the transmission project referenced in the 202(c) application.*

Dominion Energy Virginia proposes to construct the Skiffes Creek Transmission Project which consists of approximately 8 miles of new 500 kV electric transmission line from the existing 500 kV Surry Switching Station to a new 500 kV-230 kV-115 kV Skiffes Creek Switching Station in James City County to be constructed on a 51-acre parcel of land owned by Dominion Energy Virginia. The proposed Skiffes Creek Switching Station will consist of two (2) 500 kV-230 kV transformers and one (1) 230k V-115 kV transformer and associated 230 kV and 115kV breaker and a half arrangements. An approximately 20.2 mile new 230 kV line will be extended from the proposed Skiffes Creek Switching Station to the existing Whealton Substation. The original in-service date for the proposed Project was May of 2015, with the estimated construction time of 18–20 months after receipt of all applicable permits and authorizations.

The Skiffes Creek Transmission Project requires seven significant transmission outages for a total time span of approximately 18-20 months after receipt of all applicable permits and authorizations:

- 1) 292 Rock Landing – Yorktown 230 kV line (95 days).
- 2) 285 Yorktown - Denbigh – Waller 230 kV line (6 days).
- 3) 292 Rock Landing - Warwick – Whealton 230 kV line (140 days).
- 4) Whealton #2 Transformer (27 days).
- 5) 209 Yorktown - Kingsmill 230 kV line (27 days).
- 6) 285 Yorktown - Denbigh – Waller 230 kV line (81 days).
- 7) 58 Yorktown - Grafton 115 kV line (136 days).

The map below depicts the Skiffes Creek Transmission Project:



10. *The load shedding plan during peak load conditions and other time horizons. Provide the area where customers would be affected and specify how many and what type of customers would be affected.*

The North Hampton RAS is only valid for the

resulting in the loss of approximately 150,000 customers in order to prevent voltage collapse.

11. *The critical facilities (such as health care facilities, sanitation/sewer facilities, government facilities) that would be affected due to load shedding.*
Under the RAS plan controlled power interruptions to approximately 950 MWs of load during peak periods including over 150,000 customers in Newport News, Hampton, Poquoson, and York County will be implemented to maintain grid

reliability. The table below represents the number of customers potentially affected by the RAS, and the number of accounts in each special condition category, some of which represent critical facilities on the Peninsula.

| | Total Customers | TRANSMISSION/ PRIMARY DELIVERY | HOSPITALS | LARGE MILITARY BASES AND POSTS | EMERGENCY OPER CENTERS, 911, FIRE, POLICE & RESCUE SQUADS | WATER/MAJOR SEWAGE TREATMENT | CENTRAL TELECOM FACILITIES | TUNNELS, WMATA, MAJOR AIRPORTS |
|------------------------|-----------------|-----------------------------------|-----------|--------------------------------|---|------------------------------|----------------------------|--------------------------------|
| Remedial Action Scheme | 169,809 | 5 | 8 | 4 | 55 | 30 | 15 | 4 |

Under Scenario One (the need for the Yorktown Units when there are no transmission outages), during peak load periods, with no planned transmission outages and with the loss of one of the four 230 kV lines feeding the peninsula, rotating outages may be necessary in the Virginia Peninsula. A detailed load shed plan has been developed for this scenario. Distribution circuits on the Virginia Peninsula have been prioritized, and the table below represents the number of customers in each priority grouping that may be affected by rotating outages if controlled load shed scenarios arise (e.g. “W” is lowest priority and represents primarily residential customers; “Z” is highest priority and represents facilities such as hospitals, 911 centers, and water treatment plants.) Under Scenario Two (the need for the Yorktown Units during transmission outages to support construction of the Transmission Project), during peak load periods with planned transmission outages, a similar load shed plan would be implemented on the Virginia Peninsula.

| Priority | Total Customers | TRANSMISSION/ PRIMARY DELIVERY | HOSPITALS | LARGE MILITARY BASES AND POSTS | EMERGENCY OPER CENTERS, 911, FIRE, POLICE & RESCUE SQUADS | WATER/MAJOR SEWAGE TREATMENT | CENTRAL TELECOM FACILITIES | TUNNELS, WMATA, MAJOR AIRPORTS |
|----------|-----------------|-----------------------------------|-----------|--------------------------------|---|------------------------------|----------------------------|--------------------------------|
| W | 38,255 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| X | 123,792 | 1 | 0 | 1 | 34 | 11 | 15 | 5 |
| Y | 15,136 | 3 | 0 | 2 | 10 | 5 | 4 | 0 |
| Z | 37,012 | 2 | 11 | 3 | 21 | 24 | 3 | 3 |

12. *Any compliance and mitigation agreement.*

Not applicable.

13. *Operating criteria for the transmission and generation utilization during the construction of any anticipated project referenced in the 202(c) application.*

PJM anticipates the need of running the Yorktown Units to control N-1 overload under some transmission outage conditions to support the Skiffes Creek Transmission Project. The most significant N-1 overloads are:



Additionally, Dominion Energy Virginia will request PJM to run the Yorktown Units' generation to control for the [REDACTED]

[REDACTED] The operating criteria to commit the Yorktown Units for the N-2 contingency are:

- a. Unsolved N-2 contingency;
- b. Any voltage exceedance less than 0.90 p.u.; and
- c. Any thermal contingency violation above the load dump rating.

APPENDIX V

Impacted Federal, State and Local Environmental Laws

- EPA's MATS requirements (see Section III A above).
- The Yorktown Power Station is subject to the requirements of Section 316(b) of the Clean Water Act as a result of cooling water intake necessary to operate the Yorktown Units. Continued operation of the Yorktown Units will result in an increase of cooling water. This increased intake of cooling water will trigger additional study requirements in accordance with 316(b) of the Clean Water Act that would be otherwise unnecessary. These studies will likely require costly modifications to the existing cooling water intake system which would otherwise be unnecessary for units that will be ceasing operations once the Skiffes Creek Transmission Project is in service. Gallons of cooling intake water used while operating as dispatched by PJM pursuant to this request, should be excluded from calculations to determine the Yorktown Power Station "Actual Intake Flow" (AIF) as defined by 40 CFR 125.92(a). Noncompliance with these study requirements should not be considered a violation to the extent the requirements are triggered by PJM-ordered dispatch pursuant to the order issued by the Secretary.
- Yorktown Units are subject to a Conditional Use Permit ("CUP") with York County. This CUP includes environmental requirements unrelated to state and federal regulations. When operating the Yorktown Units for reliability purposes, Dominion Energy Virginia advises PJM it will employ every reasonable effort to comply with the CUP, however, in the event of plant malfunctions or operational conditions the station may be unable to comply with each requirement. Noncompliance with the CUP requirements should not be considered a violation to the extent the requirements are triggered by PJM-ordered dispatch pursuant to the order issued by the Secretary.

Attachment A

Map of North Hampton Roads Area



Attachment B

DEQ Extension YT 12



COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

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David K. Paylor
Director

(804) 698-4020
1-800-592-5482

Molly Joseph Ward
Secretary of Natural Resources

June 24, 2014

Ms. Pamela F. Faggert
Chief Environmental Officer and
Vice President-Corporate Compliance
Dominion Resources Services, Inc.
5000 Dominion Boulevard
Glen Allen, VA 23060

Re: Compliance Extension Approval for 40 CFR 63 Subpart UUUUU – National Emission Standards for Hazardous Air Pollutants (NESHAP) for Coal- and Oil-fired Electric Utility Steam Generating Units

Dear Ms. Faggert:

The Virginia Department of Environmental Quality (DEQ) received your request dated May 15, 2014 for compliance extensions from the requirements of the National Emission Standards for Hazardous Air Pollutants: Coal- and Oil-Fired Electric Utility Steam Generating Units (MATS) for affected units at the Yorktown Power Station in accordance with 40 CFR 63.6(i)(4)(i)(A). Specifically, Dominion Virginia Power (Dominion) requests a one year extension for Units 1 and 2 at the Yorktown Power Station in Yorktown, Virginia to complete construction of the additional transmission facilities necessary to deactivate the units without risk of triggering the reliability issues identified by PJM, and provide the flexibility to dispatch these generation assets during the outages of other units where pollution control installations or replacement generation are being constructed in order to comply with MATS and other environmental obligations. DEQ deems your request complete.

The compliance date for existing sources subject to 40 CFR 63, Subpart UUUUU is April 16, 2015. Per 40 CFR 63.6(i)(4)(i)(A), DEQ has the authority to grant compliance extensions up to twelve months beyond the compliance date. DEQ considers Dominion's compliance extension requests to fall within the purview of EPA's guidelines detailed in the preamble of the MATS published in the Federal Register on February 16, 2012. Accordingly, the DEQ is extending the MATS compliance dates as follows:

Dominion Virginia Power – Yorktown Power Station; Registration Number: 60137
Units 1 & 2 (one year extension until April 16, 2016)

Semiannual progress reports indicating whether the steps toward compliance outlined in the extension request have been reached shall be submitted no later than January 31 for the July 1 to December 31 period and July 31 for the January 1 to June 30 period each year. The first progress report is due July 31, 2014. A final progress report shall be submitted after all the affected units are retired. Progress reports shall be submitted to Mr. John M. Brandt, Regional Air Compliance & Monitoring Manager, Virginia Department of Environmental Quality, Tidewater Regional Office, 5636 Southern Blvd., Virginia Beach, VA 23462.

In accordance with 40 CFR 63.6(i)(14), DEQ may terminate this extension of compliance at any time if steps toward compliance are not taken. Any compliance extension requests beyond April 16, 2016 must be made to the United States Environmental Protection Agency. If you have any questions about this extension request approval, please contact Patty Buonviri at (804) 698-4016 or by electronic mail at patricia.buonviri@deq.virginia.gov.

Sincerely,

A handwritten signature in black ink, appearing to read "Michael G. Dowd", with a stylized flourish at the end.

Michael G. Dowd
Director, Air Division

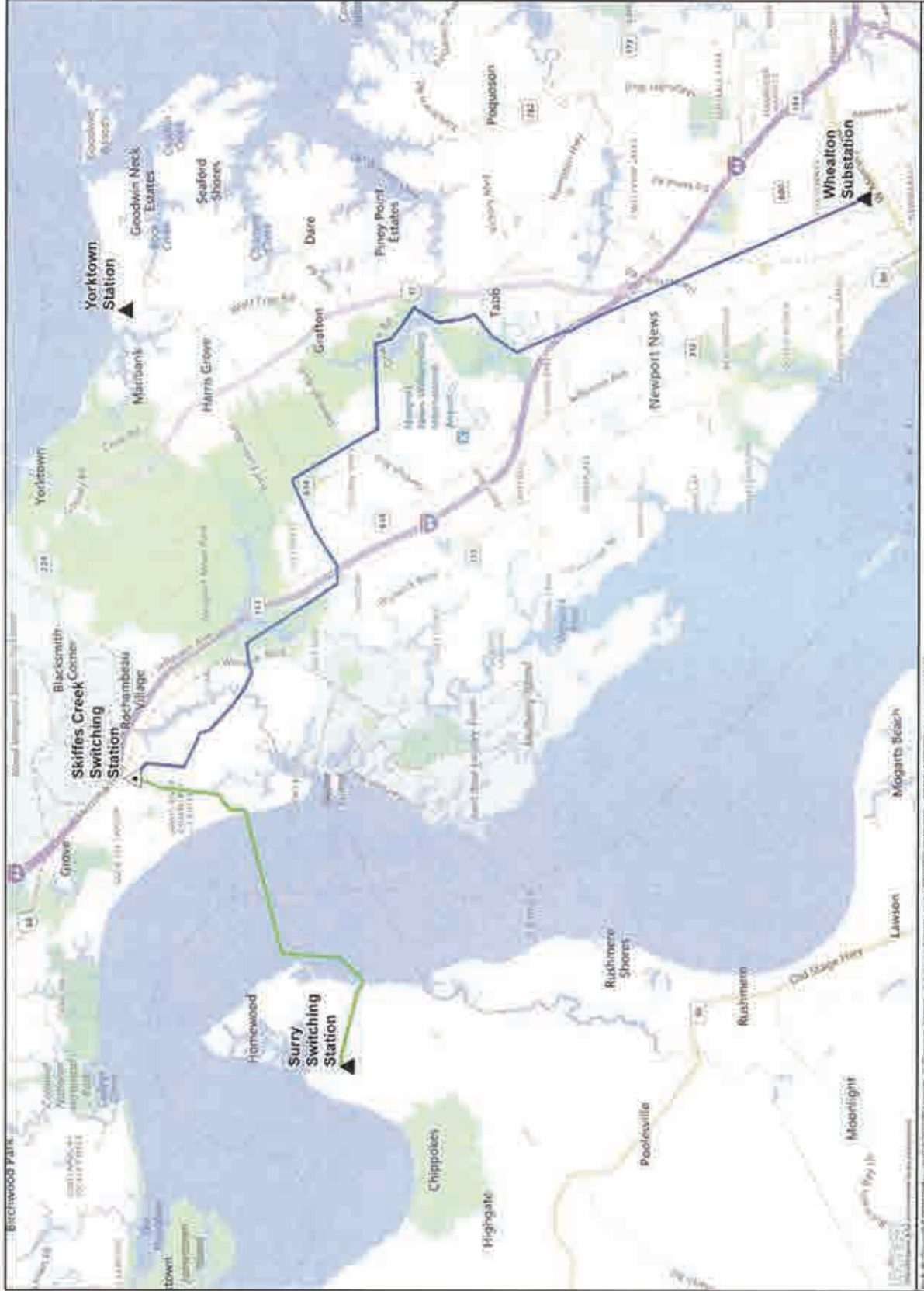
cc: Ray Chalmers, EPA Region 3
Tamera Thompson, Central Office
Todd Alonzo, Central Office
Troy Breathwaite, TRO Air Permit Manager
John Brandt, TRO Air Compliance Manager



**Surry-Skiffes Creek
500 kV Transmission
Line**

**Skiffes Creek-
Wheaton 230 kV
Transmission Line**

- ▲ Existing Station
- ▲ Proposed Station
- State Certified
500 kV Route
- State Certified
230 kV Route



Attachment C

Administrative Compliance Order on Consent, April 16, 2016

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
AIR ENFORCEMENT DIVISION, OFFICE OF ENFORCEMENT AND COMPLIANCE ASSURANCE
BEFORE THE ADMINISTRATOR

In the Matter of:

Virginia Electric and Power Company,

Respondent.

Administrative Compliance Order on Consent
AED-CAA-113(a)-2016-0005

ADMINISTRATIVE COMPLIANCE ORDER

A. PRELIMINARY STATEMENT

1. This Administrative Compliance Order (“Order”) is issued under the authority vested in the Administrator of the U.S. Environmental Protection Agency (“EPA”) by Section 113(a) of the Clean Air Act (“CAA” or the “Act”), 42 U.S.C. § 7413(a)(3) and (4).
2. On the EPA’s behalf, Phillip A. Brooks, Division Director of the Air Enforcement Division, Office of Civil Enforcement, Office of Enforcement and Compliance Assurance, U.S. Environmental Protection Agency, is delegated the authority to issue this Order under Section 113(a) of the Act.
3. Respondent is Virginia Electric and Power Company, doing business as Dominion Virginia Power (hereinafter, “Respondent” or “Dominion”), a corporation doing business in the Commonwealth of Virginia. Respondent is a “person” as defined in Section 302(e) of the Act, 42 U.S.C. § 7602(e). Respondent owns and/or operates Yorktown Power Station (hereafter, the “Facility”), located in the Commonwealth of Virginia. The Facility includes two coal-fired units (Units 1&2) and an oil-fired unit (Unit 3).
4. Respondent signs this Order on consent.

B. STATUTORY AND REGULATORY BACKGROUND

5. Section 112 of the CAA, 42 U.S.C. § 7412, authorizes the Administrator of EPA to regulate hazardous air pollutants (“HAPs”) which may have an adverse effect on health or the environment.
6. Pursuant to Section 112 of the CAA, the EPA finalized National Emission Standards for Hazardous Air Pollutants: Coal- and Oil-Fired Electric Utility Steam Generating Units Subpart UUUUU on December 16, 2011, 77 FR 9304 (Feb. 16, 2012) (40 C.F.R. Part 63 Subpart UUUUU), commonly known as the “Mercury and Air Toxics Standards.” *Id.* (hereafter, “MATS”). The MATS adopt emission limits on mercury, acid gases and other toxic pollutants for affected coal and oil-fired electric utility generating units (“EGUs”).
7. Pursuant to 40 C.F.R. § 63.9981, the MATS applies to owners or operators of coal-fired EGUs or oil-fired EGUs as defined in 40 C.F.R. § 63.10042.
8. Pursuant to 40 C.F.R. § 63.2, “owner or operator” is defined as “any person who owns, leases, operates, controls, or supervises a stationary source.”
9. Section 111(a)(3) of the Act, 42 U.S.C. § 7411(a)(3), and 40 C.F.R. § 63.2 defines a “stationary source” as “any building, structure, facility, or installation which emits or may emit any air pollutant.”
10. Pursuant to 40 C.F.R. § 63.2, “affected source” is defined as “the collection of equipment, activities, or both within a single contiguous area and under common control that is included in a Section 112(c) source category or subcategory for which a Section 112(d) standard or other relevant standard is established pursuant to Section 112 of the Act.”
11. Pursuant to 40 C.F.R. § 63.9982, the affected source to which the provisions of the MATS, 40 C.F.R. Part 63, Subpart UUUUU, applies is the collection of all existing coal- or oil-fired EGUs, as

defined in 40 C.F.R. § 63.10042, within a subcategory, [and] ... each new or reconstructed coal- or oil-fired EGU, as defined in 40 C.F.R. § 63.10042.”

12. On December 16, 2011, in parallel with finalizing the MATS, the Office of Enforcement and Compliance Assurance issued a policy memorandum describing its intended approach regarding issuance of Section 113(a) administrative orders (“Orders”) to sources that are unable to comply with the MATS but that may need to operate for up to a year to address a specific and documented reliability concern. *See* The Environmental Protection Agency’s Enforcement Response Policy For Use Of Clean Air Act Section 113(a) Administrative Orders In Relation To Electric Reliability And The Mercury and Air Toxics Standard (hereafter, “2011 MATS Enforcement Policy”). The 2011 MATS Enforcement Policy is limited in application to units that are critical for reliability purposes.
13. In issuing the 2011 MATS Enforcement Policy, the EPA believed that there would be few, if any, cases in which affected sources would not be able to comply with the MATS within the compliance period specified by Section 112(i)(3) of the CAA (including, as applicable, any extensions permitted under Section 112(i)(3)(B)), which has proven to be the case. Nonetheless, the EPA acknowledged that there may be isolated instances in which the deactivation or retirement of a unit or a delay in installation of controls due to factors beyond the owner’s/operator’s control could have an adverse, localized impact on electric reliability that could not be timely predicted or planned for with specificity. In such instances, sources could find themselves in the position of either operating in noncompliance with the MATS or halting operations and thereby potentially impacting electric reliability. Thus, although the EPA generally does not speak publicly to the intended scope of its enforcement efforts in advance of the date when a violation may occur, the Agency issued the 2011 MATS Enforcement Policy to describe the EPA’s intended enforcement response in such instances and to provide confidence

with respect to electric reliability. The policy is informed, as are EPA's enforcement actions in general, by the need to find an appropriate balance between critical public interests, bearing in mind the resources and process time required for any enforcement response.

14. The 2011 MATS Enforcement Policy specifies that to qualify for an Order in connection with it, an owner/operator must, in summary, provide early written notice of its compliance plans to the Planning Authority¹ for the area in which the source is located, timely request an Order and provide notice of such request to the EPA, FERC, its Planning Authority, any state public utility or service commission, and any state, tribal or local environmental agencies, with jurisdiction over the area in which the EGU is located, and submit a complete request for an Order.
15. A complete request pursuant to the 2011 MATS Enforcement Policy must include the following elements: copies of the early notice provided to the Planning Authority; written analysis of the reliability risk, which demonstrates that operation of the unit after the MATS Compliance Date is critical to maintaining electric reliability; written concurrence with the reliability analysis by the relevant Planning Authority (or a written explanation of why such concurrence cannot be provided); copies of any written comments received from third parties in favor of, or opposed to, operation of the unit after the MATS Compliance Date; a plan to achieve compliance with the MATS no later than one year after the MATS Compliance Date; and identification of the level of operation required to avoid the reliability risk and proposed operational limits and/or work practices to minimize or mitigate emissions to the extent practicable during non-compliant operation.

¹ Planning Authorities are the entities tasked, under NERC reliability standards, with addressing electric reliability through grid planning. In the 2011 MATS Enforcement Policy, Planning Authority was defined as "the entity defined as such in the "Glossary of Terms Used in NERC Reliability Standards," available at: http://www.nerc.com/docs/standards/rs/Reliability_Standards_Complete_Set.pdf, or any successor term thereto approved by FERC, and includes, in relevant jurisdictions, RTOs and ISOs."

16. With respect to the demonstration of reliability risk, the 2011 MATS Enforcement Policy states that the analysis provided in an Order request should demonstrate that operation of the unit after the MATS Compliance Date is critical to maintaining electric reliability, and that failure to operate the unit would: (a) result in the violation of at least one of the reliability criteria required to be filed with the Commission, and, in the case of the Electric Reliability Council of Texas, with the Texas Public Utility Commission; or (b) cause reserves to fall below the required system reserve margin.
17. Although the EPA's issuance of an Order is not conditioned upon the approval or concurrence of any entity, in light of the complexity of the electric system and the local nature of many reliability issues, for purposes of using its Section 113(a) Order authority in connection with the 2011 MATS Enforcement Policy, the EPA has sought advice in the identification and/or analysis of reliability risks, as necessary and on a case-by-case basis from reliability experts, including, but not limited to, the Federal Energy Regulatory Commission ("FERC"), Regional Transmission Operators ("RTOs"), Independent System Operators and other Planning Authorities, as EPA indicated it would do in the 2011 MATS Enforcement Policy.
18. The 2011 MATS Enforcement Policy specifically stated that an owner/operator interested in receiving a Section 113(a) administrative order pursuant to the policy should provide FERC with a copy of its complete and timely written request to the EPA.
19. On May 17, 2012, FERC issued a policy statement explaining how it intended to provide advice to the EPA on requests for an administrative order pursuant to the 2011 MATS Enforcement Policy. *See* Policy Statement of the Commission's Role Regarding the Environmental Protection Agency's Mercury and Air Toxics Standards, 139 FERC ¶ 61,131 (2012) ("FERC Policy Statement"). The FERC Policy Statement provided that the Commission will advise the EPA by submitting written Commission comments to the EPA based on the Commission's review of the

information provided in an informational filing containing the copy of the request for the administrative order provided to the Commission in an AD docket. *Id.* at Paragraph 21. Further, the FERC Policy Statement indicated that the Commission's comments would provide advice to the EPA on whether, based on the Commission's review of the informational filing, there might be a violation of a Commission-approved Reliability Standard, and may also identify issues within its jurisdiction other than a potential violation of a Commission-approved Reliability Standard. *Id.*

C. FINDINGS

20. Respondent owns and/or operates two existing coal-fired electric utility steam generating unit, as defined in 40 C.F.R. § 63.10042.
21. Respondent's operation at the Facility is subject to the MATS.
22. On June 24, 2014 Respondent received a one year extension pursuant to 40 C.F.R. 63.6(i)(4)(i)(A) from its permitting authority, extending the date by which it must comply with the MATS with respect to Unit 1 and Unit 2 at the Facility to April 15, 2016. *See* June 24, 2014 Letter from Michael G. Dowd, Virginia Department of Environmental Quality, to Pamela F. Faggert.
23. On October 15, 2015, Respondent submitted a timely and complete request for an Order pursuant to the 2011 MATS Enforcement Policy to the EPA, with a copy to FERC. That request can be found in the FERC AD docket, AD16-11-000 (hereafter "Order Request").
24. Pursuant to the Order Request, Respondent seeks an Order from April 16, 2016 to April 15, 2017, on grounds that it will not be able to comply with the MATS at Units 1 and 2 of the Facility without halting operations and thereby potentially impacting electric reliability, until a new high-voltage electric transmission line across the James River in James County, Virginia and

related project components are completed and in service (collectively, “Skiffes Creek Project”²), which is expected no earlier than the second quarter of 2017. *See* Order Request at 17 and 21.

In the Order Request, Respondent claims that construction of the Skiffes Creek Project was delayed due to factors outside of its control, including appeals of the Certificate of Convenience and Necessity for the Skiffes Creek Project and other approvals. *Id.* at 1 – 2, 4, 11 - 15.

25. More specifically, the Order Request states that Respondent will be unable to avoid violations of Reliability Standards developed by the North American Electric Reliability Corporation (“NERC”) if Units 1 and 2 are deactivated prior to the Skiffes Creek Project being put into service unless Respondent resorts to load shedding. *Id.* at 17. Specifically, Respondent maintains that the retirement of Units 1 and 2 before completion of the Skiffes Creek Project would result in Category B, C and D violations under the NERC Transmission Planning Reliability Standards without load shedding. *Id.* at 18-19; *see also*, note 11.

26. In its Order Request, Respondent provided concurrence from its Planning Authority with the reliability assessment. *See id.*, Attachment C (Written Concurrence of Planning Coordinator) at 2. In its concurrence, the Planning Authority states that “the Deactivation of both Yorktown Unit Nos. 1 and 2 will adversely affect the reliability of the PJM Transmission System, and that updates to the system were required.” *Id.*, Attachment K (PJM April 11, 2014 Letter) at 1.

27. FERC reviewed the reliability risk presented in the Order Request in accordance with the FERC Policy Statement and on December 2, 2015 found that “the loss of Dominion’s Yorktown Unit Nos. 1 and 2 prior to the completion of the Skiffes Creek Project might result in violations of NERC Reliability Standards in the absence of load shedding,” and “Dominion’s Yorktown Unit

² The Skiffes Creek Project consists of construction of the Surry-Skiffes Creek 500 kV transmission line, the Skiffes Creek-Wheaton 230 kV transmission line, and the Skiffes Creek 500 kV-230 kV-115 kV Switching Station (“Skiffes Station”), and work at Dominion Virginia Power’s existing Surry and Wheaton Stations. *Id.* at 10 and note 4. The Skiffes Creek Project will be located in the Counties of James City, Surrey, and York and the Cities of Hampton and Newport News within Virginia.

Nos. 1 and 2 are needed during the administrative order period, as requested by Dominion, to maintain electric reliability and to avoid possible NERC Reliability Standard violations.” See Commission Comments On Requests For EPA Administrative Order (December 2, 2015), at Paragraph 5, Docket No. AD16-11-000.

28. Respondent proposes to minimize emissions by operating Units 1 and 2 only as needed in order to meet the NERC Reliability Standards discussed in Paragraphs 25 - 27 of this Order. In order to do so, Respondent asserts that it will work with its Planning Authority to establish a dispatch methodology that operates Units 1 and 2 “only when called upon for reliability issues associated with the Skiffes Creek construction project, as well as for other expected and actual local area transmission issues or generation emergencies from April 16, 2016 to April 15, 2017.” *Id.* at 22-23.³ Respondent expects the required combined operation of Units 1 and 2 “to be in an estimated monthly range between 30% and 50% in any month during which the [] units are required to operate to support the Skiffes Creek project and up to 10% in months without Skiffes Creek support but requiring support for generation or local transmission reasons;” however, “the units could be required to operate above or below the estimates provided above, depending on system operating requirements.” *Id.*

D. ORDER

29. Respondent is ordered to take the actions described in this section of this Order.
30. Between April 16, 2016 and April 15, 2017, Respondent shall operate Units 1 and 2 only as needed in order to meet the NERC Reliability Standards discussed in Paragraphs 25 - 27 of this Order. In order to do so, from April 16, 2016 to April 15, 2017, Respondent shall implement a

³ Respondent indicates that “in order to maintain compliance with NERC Reliability Standards, if the [] Units must be retired before the Skiffes Creek Project is completed and operational, the Company will implement special protection schemes to shed load under certain system conditions.” Order Request at note 17.

dispatch methodology with PJM that operates Units 1 and 2 only when called upon for reliability issues associated with the Skiffes Creek Project or for other local area transmission issues or generation emergencies. Respondent expects the required combined operation of Units 1 and 2 to be between 30% and 50% in any month during which the units are required to operate to support the Skiffes Creek Project and up to 10% in months requiring support for generation or local transmission reasons in the absence of support for the Skiffes Creek Projects; however, the units may be required to operate above or below the estimates provided above, depending on system operating requirements.

31. By 11:59 pm April 15, 2017, Respondent shall achieve full compliance with the MATS at Units 1 and 2 at the Facility.

32. Within 30 days of achieving full compliance with the MATS at the Facility, Respondent shall provide written notice to the EPA indicating that compliance has been achieved and the date by which it was achieved, pursuant to the process specified in paragraph 39 of this Order.

E. OTHER TERMS AND CONDITIONS

33. Respondent admits the jurisdictional allegations contained in Sections A (Preliminary Statement) and B (Statutory and Regulatory Background) of this Order.

34. Respondent neither admits nor denies the findings in Section C (Findings) of this Order.

F. GENERAL PROVISIONS

35. Any violation of this Order may result in a civil administrative or judicial action for an injunction or civil penalties of up to \$37,500 per day per violation, or both, as provided in Sections 113(b)(2) and 113(d)(1) of the Act, 42 U.S.C. §§ 7413(b)(2) and 7413(d)(1), as well as criminal sanctions as provided in Section 113(c) of the Act, 42 U.S.C. § 7413(c). The EPA may use any information submitted under this Order in an administrative, civil judicial, or criminal action.

36. Nothing in this Order shall relieve Respondent of the duty of achieving and maintaining compliance with all applicable provisions of the Act or other federal, state or local laws or statutes, nor shall it restrict the EPA's authority to seek compliance with any applicable laws or regulations, nor shall it be construed to be a ruling on, or determination of, any issue related to any federal, state, or local permit.
37. Nothing herein shall be construed to limit the power of the EPA to undertake any action against Respondent or any person in response to conditions that may present an imminent and substantial endangerment to the public health, welfare, or the environment.
38. The provisions of this Order shall apply to and be binding upon Respondent and its officers, directors, employees, agents, trustees, servants, authorized representatives, successors, and assigns. From the Effective Date of this Order until the Termination Date as set out in paragraph 44 below, Respondent must give written notice and a copy of this Order to any successors in interest prior to any transfer of ownership or control of any portion of or interest in the Facility. Simultaneously with such notice, Respondent shall provide written notice of such transfer, assignment, or delegation to the EPA. In the event of any such transfer, assignment, or delegation, Respondent shall not be released from the obligations or liabilities of this Order unless the EPA has provided written approval of the release of said obligations or liabilities.
39. Unless this Order states otherwise, whenever, under the terms of this Order, written notice or other documentation is required to be given, it shall be directed to the individuals specified at the addresses below unless those individuals or their successors give notice of a change of address to the other party in writing:

Phillip A. Brooks
Division Director of the Air Enforcement Division, Office of Civil Enforcement, Office of
Enforcement and Compliance Assurance, US Environmental Protection Agency
Mail Code 2242A, Room 1119
1200 Pennsylvania Ave, NW
Washington, DC 20460 mail or 20004 courier (note Room 1119 on courier packages)

Dennis M. Abraham
Senior Assistant Regional Counsel
United State Environmental Protection Agency, Region III
Office of Regional Counsel, Air Branch (3RC10)
Philadelphia, PA 19103-2029
abraham.dennis@epa.gov

Pamela F. Faggert
Chief Environmental Officer and Vice President-Corporate Compliance
Dominion Resources Services, Inc.
5000 Dominion Boulevard
Glen Allen, VA 23060

Daniel L. Siegfried
Senior Counsel
Dominion Resources Services, Inc.
120 Tredegar Street
Richmond, VA 23220

All notices and submissions shall be considered effective upon receipt.

40. To the extent this Order requires Respondent to submit any information to the EPA, Respondent may assert a business confidentiality claim covering part or all of that information, but only to the extent and only in the manner described in 40 C.F.R. Part 2, Subpart B. The EPA will disclose information submitted under a confidentiality claim only as provided in 40 C.F.R. Part 2, Subpart B. If Respondent does not assert a confidentiality claim, the EPA may make the submitted information available to the public without further notice to Respondent.
41. Each undersigned representative of the Parties certifies that he or she is authorized to enter into the terms and conditions of this Order to execute and bind legally the Parties to this document.

G. EFFECTIVE DATE AND OPPORTUNITY FOR A CONFERENCE

42. Pursuant to Section 113(a)(4) of the Act, an Order does not take effect until the person to whom it has been issued has had an opportunity to confer with the EPA concerning the alleged violations. By signing this Order, Respondent acknowledges and agrees that it has been provided

an opportunity to confer with the EPA prior to issuance of this Order. Accordingly, this Order will take effect immediately upon signature by the latter of Respondent or the EPA.

H. JUDICIAL REVIEW

43. Respondent waives any and all remedies, claims for relief and otherwise available rights to judicial or administrative review that Respondent may have with respect to any issue of fact or law set forth in this Order, including any right of judicial review under Section 307(b)(1) of the Clean Air Act, 42 U.S.C. § 7607(b)(1).

I. TERMINATION

44. This Order shall terminate on the earlier of the following (the “Termination Date”) at which point Respondent shall operate in compliance with the Act:
- a. 11:59 pm April 15, 2017;
 - b. The effective date of any determination by the EPA that Respondent has achieved compliance with all terms of this Order; or
 - c. Immediately upon receipt by Respondent of notice from the EPA finding that an imminent and substantial endangerment to public health, welfare, or the environment has occurred.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
AIR ENFORCEMENT DIVISION, OFFICE OF ENFORCEMENT AND COMPLIANCE ASSURANCE
BEFORE THE ADMINISTRATOR

In the Matter of:

Virginia Electric and Power Company,

Respondent.

Administrative Compliance Order on Consent
AED-CAA-113(a)-2016-0005

For United States Environmental Protection Agency, Air Enforcement Division, Office of Enforcement and Compliance Assurance:

4/16/2016
Date


Phillip A. Brooks

Division Director of the Air Enforcement Division, Office of Civil Enforcement, Office of Enforcement and Compliance Assurance, US Environmental Protection Agency
Mail Code 2242A, Room 1119
1200 Pennsylvania Ave, NW
Washington, DC 20460 mail or 20004 courier (note Room 1119 on courier packages)

For Virginia Electric and Power Company:


Signature

4/11/2016
Date

Printed Name: Pamela F. Eggert
Title: Chief Environmental Officer and Vice President-Corporate Compliance
Address: Dominion Resources Services, Inc.
5000 Dominion Boulevard
Glen Allen, VA 23060

CERTIFICATE OF SERVICE

I certify that the foregoing "Administrative Compliance Order" in the Matter of Virginia Electric and Power Company, Order AED-CAA-113(a)-2016-0005, was filed and copies of the same were mailed to the parties as indicated below.

Certified Mail

Pamela F. Faggert
Chief Environmental Officer and Vice President-Corporate Compliance
Dominion Resources Services, Inc.
5000 Dominion Boulevard
Glen Allen, VA 23060

Daniel L. Siegfried
Senior Counsel
Dominion Resources Services, Inc.
120 Tredegar Street
Richmond, VA 23220

Michael G. Dowd
Director, Air Enforcement Division
Virginia Department of Environmental Quality
629 East Main Street
P.O. Box 1105
Richmond, Virginia 23218

4/18/16

Date



Tawanna Cathey

Attachment D

Reliability Impact Letter,
December 14, 2011



955 Jefferson Avenue
Valley Forge Corporate Center
Norristown, PA 19403-2497

Michael J. Kormos
Senior Vice President - Operations

December 14, 2011

Doug Holley
Vice President – Fossil & Hydro System Operations
Dominion Generation
Innsbrook Technical Center
5000 Dominion Boulevard
Glen Allen, VA 23060

Re: Deactivation Request for Chesapeake Unit 1 and Unit 2 and Yorktown Unit 1

Dear Mr. Holley,

This letter is submitted on behalf of PJM Interconnection, L.L.C. ("PJM"), in response to the Dominion Generation ("Dominion") notices dated November 7, 2011 ("November 7 Notices") requesting to deactivate (retire) the Chesapeake generating units Nos. 1 and 2 and the Yorktown generating unit No. 1 located in the PJM region, effective December 31, 2014. PJM combined the deactivation analysis for these three units into one report since they are scheduled to be deactivated on the same date.

In accordance with section 113.2 of the PJM Tariff, this letter will serve to notify you that the Deactivation of the Chesapeake generating units Nos. 1 and 2 and the Yorktown generating unit No. 1 will adversely affect the reliability of the PJM Transmission absent upgrades to the Transmission System.

PJM Interconnection Analysis performed a preliminary study of the Transmission System and found reliability concerns resulting from the deactivation of these generating units. The specific reliability impacts resulting from the proposed Deactivations include:

Load deliverability study:

- Voltage collapse for the loss of the Bedington – Black Oak 500 kV line.

DOM SC 000335

N-1-1 Thermal and Voltage study:

- Overload of the Millville – Old Chapel 138 kV line (AP) for the loss of the Morrisville – Front Royal 500 kV line plus the loss of the Loudoun – Meadowbrook 500 kV line.

In addition, Dominion Transmission Planning assessed the impact of the proposed generator retirements using the posted Dominion Planning Criteria. The specific reliability impacts resulting from that analysis includes:

Critical System Condition (No Yorktown #3):

- Overload of Dooms – Lexington 500 kV line for the outage of Bath – Valley 500 kV line.
- Overload of Chuckatuck – Newport News 230 kV line for outage of Surry – Winchester 230 kV line.
- Overload of Surry – Winchester 230 kV line for outage of Chuckatuck – Newport News 230 kV line.
- Overload of Whealton – Winchester 230 kV line for outage of Chuckatuck – Newport News 230 kV line.
- Overload of Lanexa – Waller 230 kV line for outage of Chickahominy – Waller 230 kV line.
- Overload of Chuckatuck – Newport News 230 kV line for outage of Lanexa – Waller 230 kV line plus outage of Chickahominy – Waller 230 kV line.
- Overload of Thrasher to Huntsman 230 kV line for outage of Septa – Fentress 500 kV line and outage of Yadkin – Suffolk 500 kV line.
- Overload of Lanexa – Waller 230 kV line for outage of Chickahominy – Waller 230 kV line and outage of Newport News – Shellbank 230 kV line. Voltage issues also identified at Northampton Roads.
- Overload of Chickahominy – Waller 230 kV line, Lanexa – Waller 230 kV line, and Yorktown – Whealton line for outage of tower line Surry – Winchester and Chuckatuck – Newport News. Also identified voltage collapse in the North and South Hampton Roads area.

Critical System Condition (No Surry #2):

- Overload of Dooms – Lexington 500 kV line for outage of Bath – Valley 500 kV line.

Critical System Condition (No Chesapeake #4):

- Overload of Yadkin – Chesapeake line for outage of Yadkin – Chesapeake – Greenwich 230 kV line.

PJM and the affected Transmission Owners, primarily Dominion Virginia Power, estimate that it will take approximately three and one-half years to complete the Transmission System upgrades necessary to alleviate the identified reliability impacts. This estimated timeframe of June 2015, to complete the required reliability upgrades,

would have them in-service prior to the next summer peak period following Dominion's proposed Deactivation Date of December 31, 2014 for the Chesapeake generating units Nos. 1 and 2 and the Yorktown generating unit No. 1. PJM continues to work with the affected Transmission Owner Zones to finalize the details of the required upgrade(s), including a more specific completion date. As some of the required upgrades are large in scope and may require siting approval by state commissions, PJM will continue to evaluate the estimated in-service date for these required system upgrades and will report back to you periodically regarding those projected completion dates.

Regardless of whether the deactivation of a generating unit would adversely impact the reliability of the Transmission System, the Generation Owner may deactivate its generating unit, subject to section 113.1 notice requirements. Pursuant to Section 113.2 of the PJM Tariff, Dominion will need to inform PJM of its Deactivation Date for the Chesapeake generating units Nos. 1 and 2 and the Yorktown generating unit No. 1.

Please be advised that PJM's deactivation analysis does not supersede any outstanding contractual obligations between the Chesapeake generating units Nos. 1 and 2 and the Yorktown generating unit No. 1 and any other parties that must be resolved before deactivating the generating units.

Also please note that in accordance with the PJM Tariff Part VI, Subpart C, a Generation Owner will lose the Capacity Interconnection Rights associated with a deactivated generating unit one year from the Deactivation Date unless the holder of such rights submits a new Generation Interconnection Request within one year after the Deactivation Date.

In addition, if a generating unit is receiving Schedule 2 payments for Reactive Supply and Voltage Control, the generating unit owner must inform PJM when the unit is deactivated so that an adjustment in those payments can be made.

Please contact Bill Patzin (610-666-4698) (patziw@pjm.com) in PJM's Interconnection Coordination Department to discuss the next steps in this process, or if you have any questions about the PJM analysis.

Very truly yours,



Michael J. Kormos
Senior Vice President
Operations

cc: Jeff Currier, Dominion (jeffrey.currier@dom.com)

#677403

DOM SC 000337

Attachment E

Reliability Impact Letter,
April 11, 2014



2750 Monroe Blvd
Audubon, PA 19403-2497

Michael J. Kormos
Executive Vice President –
Operations

April 11, 2014

Edward H. Baine
VP, Power Generation System Operations
Dominion Generation
5000 Dominion Boulevard
Glen Allen, VA 23060

Re: Updated PJM Reliability Notification for Deactivation of Yorktown Generating Units Nos. 1 and 2

Dear Mr. Baine:

This letter is submitted by PJM Interconnection, L.L.C. ("PJM") as a follow-up to the November 8, 2012 and December 14, 2012 ("PJM Letters") Deactivation Response letters sent to Mr. Doug Holley of Dominion Generation ("Dominion Generation") regarding the Deactivation of Dominion's Yorktown generating units Nos. 1 and 2. The PJM Letters indicated that the Deactivation of both Yorktown Units Nos. 1 and 2 will adversely affect the reliability of the PJM Transmission System, and that upgrades to the system were required. The PJM Letters also mentioned that the upgrades were expected to be completed by June 1, 2015 and, therefore, the Yorktown Units Nos. 1 and 2 could deactivate as scheduled on December 31, 2014. PJM has determined that due to regulatory and permitting issues, the required upgrades will not be completed by June 1, 2015. Instead, such upgrades are estimated to be completed by the 4th quarter of 2016. This new date is beyond the requested Deactivation Date of December 31, 2014 for the Yorktown Units Nos. 1 and 2. PJM will continue to refine its analysis, to determine when the Yorktown Units can be released without adversely impacting the reliability of the bulk electric system.

As you are aware, regardless of whether Deactivation of a generating unit would adversely impact the reliability of the Transmission System, the Generation Owner may deactivate its generating unit, subject to section 113.1 notice requirements. Pursuant to Part V, Section 113.2 of the PJM Tariff, the Generation Owner must notify PJM within 30 days of this letter whether these generating units will continue to operate beyond their desired Deactivation Date during the period of construction of the Transmission System reliability upgrades necessary to alleviate the reliability impacts resulting from the Deactivation of these generating units. If Dominion Generation determines that the generating units will continue operating, Dominion Generation must provide PJM with an updated estimate of the amount of any project investment that would be required to keep the units in service and the time period the generating units would be out of

service for repairs, if any. For generating units that will continue to operate beyond their Deactivation Date, (i) PJM shall provide, within 45 days of this letter, an updated estimate of the amount of time it will take to complete the necessary upgrades to alleviate the reliability impact; and (ii) within 60 days of the letter, PJM will post on its internet site the full details of the transmission upgrades necessary to alleviate the reliability impact resulting from the Deactivation of the unit(s).

Please contact Bill Patzin (610-666-4698) (William.Patzin@pjm.com) in PJM's Infrastructure Coordination Department or Aaron Berner (610-666-8951) (Aaron.Berner@pjm.com) Manager of PJM's Interconnections Analysis Department to discuss the next steps for these proposed deactivated units, or if you have any questions about the PJM analysis.

Sincerely,

A handwritten signature in black ink, appearing to read "Michael J. Kormos", with a stylized flourish at the end.

Michael J. Kormos

cc: Jeff Currier, Dominion {jeffrey.currier@dom.com}

Attachment F

Appendix IV Question No. 6,
“EPA MATS Requirement for
Yorktown Units 1 & 2
Set Forth in 40 CFR Part 63

Yorktown Emissions Calculations

Best Case Emissions

| | | | | | |
|-------------------------------|-------------------------|-----|-------|-------|-----|
| 15% per year for construction | Total Emissions (TPY) * | PM | SO2 | NOx | Hg |
| 25-day runs annually for load | | | | | |
| | | 272 | 5,753 | 1,525 | 8.2 |

Expected Case Emissions

| | | | | | |
|-------------------------------|-------------------------|-----|-------|-------|------|
| 15% per year for construction | Total Emissions (TPY) * | PM | SO2 | NOx | Hg |
| 30-day runs annually for load | | | | | |
| | | 422 | 7,749 | 2,055 | 11.6 |

Worst Case Emissions

| | | | | | |
|---------------------|-------------------------|-------|--------|--------|------|
| 8760 hours per year | Total Emissions (TPY) * | PM | SO2 | NOx | Hg |
| | | | | | |
| | | 2,166 | 39,801 | 10,553 | 59.5 |

* Total emissions for mercury is reported in pounds per year (PPY) instead of tons per year (TPY)

Yorktown Water Usage Calculations

Best Case Flows

| | | |
|---------------------------------|------------------------|--------|
| 15% annually for grid stability | Total Water Flow (MGY) | 26,096 |
| 25-day runs annually for load | | |

Expected Case Flows

| | | |
|---------------------------------|------------------------|--------|
| 15% annually for grid stability | Total Water Flow (MGY) | 33,917 |
| 30-day runs annually for load | | |

Worst Case Flows

| | | |
|---------------------|------------------------|---------|
| 8760 hours annually | Total Water Flow (MGY) | 115,632 |
|---------------------|------------------------|---------|



PJM Interconnection, L.L.C.
2750 Monroe Boulevard
Audubon, PA 19403

Steven R. Pincus
Associate General Counsel
T: (610) 666-4438 | F: (610) 666-8211
steven.pincus@pjm.com

August 24, 2017

The Honorable James Richard Perry
Secretary of the Energy
United States Department of Energy
1000 Independence Ave, SW
Washington, DC 20585

Re: Order No. 202-17-2 Renewal Application Filing

Dear Secretary Perry:

Pursuant to Section 202(c) of the Federal Power Act (“FPA”),¹ Section 301(b) of the Department of Energy Organization Act,² the Department of Energy’s (“DOE”) Rules of Practice and Procedure³ and Order No. 202-17-2 (the “Order”) issued on June 16, 2017, by the Secretary of Energy (“Secretary”), PJM Interconnection, L.L.C. (“PJM”) respectfully submits a request for a 90-day renewal of the Order. PJM incorporates by reference PJM’s application submitted on June 13, 2017 (the “Application”), and all attachments and appendices thereto. Concurrent with this renewal request, PJM along with Dominion Virginia Electric and Power Company (“Dominion Energy Virginia”) submits a separate report and data required by the Order that will allow the Secretary to review past action under the Order to support the continued need for the emergency relief.

BACKGROUND

In the Application, PJM stated the need to request renewals of the Order on a rolling basis until the PJM ordered Regional Transmission Expansion Planning Process (“RTEPP”) Skiffes Creek Transmission Project is placed into service, which was at that time anticipated to

¹ 16 U.S.C. § 824a(c)

² 42 U.S.C. § § 7101 and 7151(b)

³ 16 C.F.R. §§ 205.370, 205.371 and 205.372 and 205.373

be completed 18-20 months once all permits are issued. The Secretary directed such renewal requests to be submitted 21 days prior to expiration of the Order (*i.e.* August 24, 2017) “if the conditions change – for example, if Dominion Energy Virginia obtains all permitting approvals for the RTEPP upgrade...”⁴

In the Order, the Secretary determined “that an emergency exists in the Commonwealth of Virginia due to a shortage of electric energy, a shortage of facilities for the generation of electric energy, and other causes, and that issuance of this Order will meet the emergency and serve the public interest.”⁵ In doing so, the Secretary directed Dominion Energy Virginia to operate Yorktown Units 1 and 2 as directed by PJM as needed to address reliability issues for the entire 90-day period, June 16, 2017 to September 14, 2017, or any renewal thereof.⁶

In the Order, the Secretary authorized PJM to operate Yorktown Units 1 and 2, with no planned transmission outages, to maintain reliability when Dominion Energy Virginia total load reaches approximately 18,400 MW (referred to as “Scenario 1” in the Application).⁷ The Order also authorized operation of the Yorktown Units 1 and 2 to maintain reliability at lower Dominion Energy Virginia load levels during various planned transmission outage to support construction of the Skiffes Creek Transmission Project (referred to as “Scenario 2”). As stated in the Application, under Scenario 2 the specific planned transmission outage condition will determine the Dominion Energy Virginia total load level at which the Yorktown Units are required to run to maintain reliability.⁸ A table in Appendix III of the Application included the

⁴ Order at page 2 (the RTEPP upgrade referenced in the Order is the “Skiffes Creek Transmission Project)”

⁵ Order at page 1

⁶ Order as page 2

⁷ Order at page 1

⁸ Appendix II of the Application includes examples of running the Yorktown Units at different Dominion Energy Virginia total load levels concurrent with planned transmission outages to ensure reliability.

then current estimates for Yorktown units run time for a planned transmission outage sequence starting in the summer of 2017, which was dependent upon the issuance of the Army Corps of Engineers' permit. The Army Corps' permit was issued July 3, 2017, and Dominion Energy Virginia started construction of the Skiffes Creek project on July 10, 2017. The planned transmission outages are coordinated between PJM and Dominion Energy Virginia to ensure the reliability of service in the area and to support the construction schedule.

RENEWAL REQUEST

As stated in the Application, the Skiffes Creek Transmission Project is expected to be completed and placed into service approximately 18-20 months after receipt of all applicable permits. Thus, given the extended nature of the emergency, PJM proposed to submit requests for renewals of the Secretary's emergency order for successive 90 day periods. Following issuance of the Army Corps' permit on July 3, 2017, Dominion Energy Virginia started construction of the Skiffes Creek project on July 10, 2017. Therefore, the emergency as set forth in the Application and as determined in the Order continues.

The attached Skiffes Creek Construction Transmission Outage Schedule and Yorktown Units 1 and 2 Emission Estimates as of August 18, 2017 (Attachment 1), includes a revised construction schedule and planned transmission outage sequence, and Yorktown run and emission estimates. Attachment 1 also provides actual emissions from the July 11-25 Yorktown unit runs, and the current estimated planned transmission outage time frames, transmission limiting contingencies, Dominion Zone load thresholds which trigger the need to operate Yorktown Units 1 and/or 2, estimated run time in days, and Dominion Energy Virginia's estimated emissions for the remainder of the Order period based on the run time estimates. PJM called on Yorktown Unit 2 to run on August 22, 2017 to ensure reliability in compliance with the

Order, and since the emission and water usage data is not yet available, the Attachment 1 will be updated with all actual run and emissions data for the 90 day period as directed in the Order when the next renewal request is submitted or as otherwise directed by the Secretary.

The attached spreadsheet (Attachment 2), Yorktown Projected Emissions, provides detailed estimated emissions for the Yorktown Units 1 and 2 on a monthly basis for August 2017 through December 2018 as well as actual emissions data for the July 11-25 runs. The construction schedule will likely change and, if necessary, PJM and Dominion Energy Virginia will provide DOE with revised construction schedules and estimated emissions with each renewal application under the Order. Given the extended nature of the emergency, PJM will continue to submit requests for renewals of the Secretary's emergency order for successive 90 day periods until such time as the Skiffes Creek Construction Transmission is completed and placed into service and the emergency no longer exists.

CONCLUSION

PJM respectfully requests that the Secretary grant this renewal application and order the continued generation of Yorktown Units 1 & 2 to alleviate the emergency described in the Application and hereinabove prior to the expiration of the current Order (i.e. September 14, 2017). PJM seeks an order of the Secretary under Section 202 (c) of the FPA which provides: (i) an emergency continues to exist in the Commonwealth of Virginia due to a shortage of electric energy, a shortage of facilities for the generation of electric energy, and other causes, and that issuance of a renewal Order will meet the emergency and serve the public interest; (ii) from September 14, 2017 to December 13, 2017, Dominion Energy Virginia is directed to operate Yorktown Units 1 and 2 as directed by PJM as needed to maintain grid reliability or for other

local area transmission issues; (iii) Dominion Energy Virginia shall continue to follow the dispatch methodology submitted by PJM on June 27, 2017, as required by the Order; and (iv) PJM and Dominion Energy Virginia shall report all dates on which Yorktown Units 1 and 2 are operated as well as the estimated emissions and water usage data associated with their operation to be submitted at least 14 days before the expiration of the renewal Order. PJM also respectfully requests that DOE clarify that the Order applied, and all renewal orders will apply, to all times where Yorktown Units 1 and 2 are needed to run for reliability, including the periods referred to as “Scenario 1” and “Scenario 2” in the Application.

REQUEST FOR CEII DESIGNATION

The filing consists of the following:

1. Non Public version of Attachments 1 (password protected containing Critical Energy Infrastructure (“CEII”) material).
2. Public version Attachments 1 (public version with CEII material redacted).

In regard to the Non Public version of Attachments 1, PJM respectfully requests the information submitted to the DOE be designated as CEII pursuant Federal Power Act (“FPA”) Section 215A(d) and the implementing regulations, 18 C.F.R. Section 388.113.

In FAST Act Section 215A(a)(3), CEII is specifically defined as information “designated as critical electric infrastructure information by ... the Secretary of the Department of Energy pursuant to subsection (d).”⁹ Under FPA Section 215A(a)(3), CEII includes information that is

⁹ FAST Act, Pub. L. No. 114-94, section 61,003, 129 Stat. 1312, 1776.

submitted to the DOE, and designated as such by DOE.¹⁰ The regulations define CEII in pertinent part as follows:

“1) *Critical electric infrastructure information* means information related to critical electric infrastructure ... Provided to the Commission or other Federal agency ... that is designated as critical electric infrastructure information by the Commission or the Secretary of the Department of Energy pursuant to section 215A(d) of the Federal Power Act. Such term includes information that qualifies as critical energy infrastructure information under the Commission's regulations. Critical Electric Infrastructure Information is exempt from mandatory disclosure under the Freedom of Information Act, 5 U.S.C. 552(b)(3) and shall not be made available by any Federal, State, political subdivision or tribal authority pursuant to any Federal, State, political subdivision or tribal law requiring public disclosure of information or records pursuant to section 215A(d)(1)(A) and (B) of the Federal Power Act.”

2) *Critical energy infrastructure information* means specific engineering, vulnerability, or detailed design information about ... existing critical infrastructure that:

- (i) Relates details about the production, generation, transportation, transmission, or distribution of energy;
- (ii) Could be useful to a person in planning an attack on critical infrastructure;
- (iii) Is exempt from mandatory disclosure under the Freedom of Information Act, 5 U.S.C. 552; and
- (iv) Does not simply give the general location of the critical infrastructure.”¹¹

PJM submits the redacted information in Attachment 1 is CEII because it provided details about the production, generation and transportation of energy, which if publically available could

¹⁰ FAST Act, Pub. L. No. 114-94, section 61,003, 129 Stat. 1312, 1773 (“critical electric infrastructure information means information ... generated by or provided to the Commission or other Federal agency ... that is designated as critical electric infrastructure information by the Commission or the Secretary pursuant to subsection (d)”).

¹¹ 18 C.F.R. Section 388.113(c)(1) and (2).

be useful in planning an attack on critical infrastructure in the North Hampton Road area of the Commonwealth of Virginia namely the electric transmission system.

Respectfully submitted,

A handwritten signature in dark ink, appearing to read "Steven R. Pincus". The signature is fluid and cursive, with the first name "Steven" being more prominent.

Steven R. Pincus
Associate General Counsel
PJM Interconnection, L.L.C.

Craig Glazer
VP, Federal Government Policy
PJM Interconnection, L.L.C.

Cc: Pat Hoffman, U.S. Department of Energy
Catherine Jereza, U.S. Department of Energy
Rakesh Batra, U.S. Department of Energy
Michael C. Regulinski, Dominion Energy Services, Inc.
Casey Roberts, Sierra Club Environmental Law Program (Public Version of Attachment 1)

ATTACHMENT 1
Skiffes Creek outages
table_081817 with
Emissions Estimates
Renewal

Skiffes Creek Construction Transmission Outage Schedule and Yorktown Units 1 and 2 Emission Estimates as of August 18, 2017 (subject to change)

| Outage | Outage Time Frame | Limiting Contingency | Load Threshold | Hours over Load Threshold** | Days over load threshold ** | Dominion Emissions Estimates |
|------------------------------|-------------------|------------------------------|------------------------------|-----------------------------|-----------------------------|---|
| Redacted Information is CEII | 7/9/17-9/29/17 | Redacted Information is CEII | Redacted Information is CEII | 87 | 18 | NOx 243.06 SO2 933.11 PM10 7.73 CO2 122,385.60 Pb 0.0100 Hg 0.0015 HCl 22.01 HF 3.56 CO 11.88 |
| Redacted Information is CEII | 9/25/17-10/29/17 | Redacted Information is CEII | Redacted Information is CEII | 0 | 0 | NOx 0.0 SO2 0.0 PM10 0.0 CO2 - Pb 0.0 Hg 0.0 HCl 0.0 HF 0.0 CO 0.0 |
| Redacted Information is CEII | 9/29/17-10/27/17 | Redacted Information is CEII | Redacted Information is CEII | 0 | 0 | NOx 0.0 SO2 0.0 PM10 0.0 CO2 - Pb 0.0 Hg 0.0 HCl 0.0 HF 0.0 CO 0.0 |
| Redacted Information is CEII | 10/27/17-01/19/18 | Redacted Information is CEII | Redacted Information is CEII | 21 | 4 | NOx 54.01 SO2 207.36 PM10 1.72 CO2 27,196.80 Pb 0.0022 Hg 0.0003 HCl 4.89 HF 0.79 CO 2.64 |
| Redacted Information is CEII | 10/30/17-1/28/18 | Redacted Information is CEII | Redacted Information is CEII | 8 | 3 | NOx 40.51 SO2 155.52 PM10 1.29 CO2 20,397.60 Pb 0.0017 Hg 0.0003 HCl 3.67 HF 0.59 |

Skiffes Creek Construction Transmission Outage Schedule and Yorktown Units 1 and 2 Emission Estimates as of August 18, 2017 (subject to change)

[illegible]

Skiffes Creek Construction Transmission Outage Schedule and Yorktown Units 1 and 2 Emission Estimates as of August 18, 2017 (subject to change)

| | | | | | | |
|------------------------------|-------------------|------------------------------|--|-----|--------|--|
| Redacted Information is CEII | 4/23/18-9/23/18 | Redacted Information is CEII | Redacted Information is CEII | 117 | 21 | NOx 283.57 SO2 1088.63 PM10 9.02 CO2 142,783.20 Pb 0.0116 Hg 0.0018 HCl 25.68 HF 4.16 CO 13.86 |
| Redacted Information is CEII | 10/8/18-10/14/18 | Redacted Information is CEII | Redacted Information is CEII | 0 | 0 | NOx 0.0 SO2 0.0 PM10 0.0 CO2 - Pb 0.0 Hg 0.0 HCl 0.0 HF 0.0 CO 0.0 |
| Redacted Information is CEII | 10/8/18-12/9/18 | Redacted Information is CEII | Redacted Information is CEII | 0 | 0 | NOx 0.0 SO2 0.0 PM10 0.0 CO2 - Pb 0.0 Hg 0.0 HCl 0.0 HF 0.0 CO 0.0 |
| Redacted Information is CEII | 10/8/18-12/30/18 | Redacted Information is CEII | Redacted Information is CEII | 3 | 1 | NOx 13.50 SO2 51.84 PM10 0.43 CO2 6,799.20 Pb 0.0006 Hg 0.0001 HCl 1.22 HF 0.20 CO 0.66 |
| Redacted Information is CEII | 10/15/18-10/21/18 | Redacted Information is CEII | Redacted Information is CEII Redacted Information is CEII | 40 | 4 1 | NOx 54.01 SO2 207.36 PM10 1.72 CO2 27,196.80 Pb 0.0022 Hg 0.0003 HCl 4.89 HF 0.79 CO 2.64 |
| Redacted Information is CEII | 10/22/18-10/28/18 | Redacted Information is CEII | Redacted Information is CEII | 0 | 0 | NOx 0.0 SO2 0.0 PM10 0.0 CO2 - |

Skiffes Creek Construction Transmission Outage Schedule and Yorktown Units 1 and 2 Emission Estimates as of August 18, 2017 (subject to change)

| | | | | | | | | | | | | | | | | | | |
|---------------------------|------|----------|----------|-----|-----|----------|----------|-----------|----------|----------|---------|-----|----------|----------|----------|----------|-----|---------|
| Emission Estimates (tons) | SO2 | 391.87 | 466.56 | 0.0 | 0.0 | 103.68 | 362.88 | 881.27 | 207.36 | 155.52 | 51.84 | 0.0 | 518.39 | 466.56 | 103.68 | 259.20 | 0.0 | 51.84 |
| | PM10 | 3.72 | 3.87 | 0.0 | 0.0 | 0.86 | 3.01 | 7.30 | 1.72 | 1.29 | 0.43 | 0.0 | 4.30 | 3.87 | 0.86 | 2.15 | 0.0 | 0.43 |
| | CO2 | 49,173.9 | 61,192.8 | - | - | 13,598.4 | 47,594.4 | 115,586.4 | 27,196.8 | 20,397.6 | 6,799.2 | - | 67,992.0 | 61,192.8 | 13,598.4 | 33,996.0 | - | 6,799.2 |
| | Pb | 0.0040 | 0.0050 | 0.0 | 0.0 | 0.0011 | 0.0039 | 0.0094 | 0.0022 | 0.0017 | 0.0006 | 0.0 | 0.0055 | 0.0050 | 0.0011 | 0.0028 | 0.0 | 0.0006 |
| | Hg | 0.0008 | 0.0008 | 0.0 | 0.0 | 0.0002 | 0.0006 | 0.0014 | 0.0003 | 0.0003 | 0.0001 | 0.0 | 0.0008 | 0.0008 | 0.0002 | 0.0004 | 0.0 | 0.0001 |
| | HCl | 11.48 | 11.00 | 0.0 | 0.0 | 2.45 | 8.56 | 20.79 | 4.89 | 3.67 | 1.22 | 0.0 | 12.23 | 11.00 | 2.45 | 6.11 | 0.0 | 1.22 |
| | HF | 1.43 | 1.78 | 0.0 | 0.0 | 0.40 | 1.39 | 3.37 | 0.79 | 0.59 | 0.20 | 0.0 | 1.98 | 1.78 | 0.40 | 0.99 | 0.0 | 0.20 |
| | CO | 4.78 | 5.94 | 0.0 | 0.0 | 1.32 | 4.62 | 11.22 | 2.64 | 1.98 | 0.66 | 0.0 | 6.60 | 5.94 | 1.32 | 3.30 | 0.0 | 0.66 |
| | | | | | | | | | | | | | | | | | | |

Figures highlighted in green are actual emission data for the month

ATTACHMENT 2

Copy of Yorktown July 2017 Run Time and Projected Emissions Renewal

| DateHour | YT00 PGMW1 Value | YT00 PGMW2 Value | YT00 OHPM Value | YT00 OHPM Missing | YT00 ONOXE Value | YT00 ONOXE Missing | YT00 QSO2 | YT00 QSO2M Value | YT00 QSO2M Missing | YT00 QCO2 | YT00 QCO2M | YT00 QCO2M Missing | |
|--------------|---------------------|---------------------|--------------------|----------------------|---------------------|-----------------------|-----------|---------------------|-----------------------|-----------|------------|-----------------------|----|
| 07/102017 00 | 0 | 0 | 0 | FALSE | 0 | FALSE | 0 | 0 | FALSE | 0 | 0 | FALSE | 0 |
| 07/102017 01 | 0 | 0 | 0 | FALSE | 0 | FALSE | 0 | 0 | FALSE | 0 | 0 | FALSE | 0 |
| 07/102017 02 | 0 | 0 | 0 | FALSE | 0 | FALSE | 0 | 0 | FALSE | 0 | 0 | FALSE | 0 |
| 07/102017 03 | 0 | 0 | 0 | FALSE | 0 | FALSE | 0 | 0 | FALSE | 0 | 0 | FALSE | 0 |
| 07/102017 04 | 0 | 0 | 4.4 | FALSE | 0.141 | FALSE | 84.3 | 11.2 | FALSE | 1 | 0.5 | FALSE | 0 |
| 07/102017 05 | 0 | 0 | 1.1 | FALSE | 0.158 | FALSE | 52.6 | 0.7 | FALSE | 2.3 | 0.1 | FALSE | 0 |
| 07/102017 06 | 0 | 0 | 0 | FALSE | 0 | FALSE | 0 | 0 | FALSE | 0 | 0 | FALSE | 0 |
| 07/102017 07 | 0 | 0 | 0 | FALSE | 0 | FALSE | 0 | 0 | FALSE | 0 | 0 | FALSE | 0 |
| 07/102017 08 | 0 | 0 | 0 | FALSE | 0.001 | FALSE | 0 | 0 | FALSE | 0 | 0 | FALSE | 0 |
| 07/102017 09 | 0 | 0 | 0 | FALSE | 0.001 | FALSE | 0 | 0 | FALSE | 0 | 0 | FALSE | 0 |
| 07/102017 10 | 0 | 0 | 0 | FALSE | 0.001 | FALSE | 0 | 0 | FALSE | 0 | 0 | FALSE | 0 |
| 07/102017 11 | 0 | 0 | 1 | FALSE | 0.064 | TRUE | 31.1 | 63.4 | TRUE | 0 | 0 | FALSE | 56 |
| 07/102017 12 | 0 | 0 | 14 | FALSE | 0.064 | TRUE | 31.1 | 65.2 | TRUE | 0.2 | 1.4 | FALSE | 60 |
| 07/102017 13 | 0 | 0 | 30.6 | FALSE | 0.064 | TRUE | 31.1 | 71 | TRUE | 0.4 | 3.1 | FALSE | 60 |
| 07/102017 14 | 0 | 0 | 40.3 | FALSE | 0.064 | TRUE | 31.1 | 74.9 | TRUE | 0.5 | 4.1 | FALSE | 60 |
| 07/102017 15 | 0 | 0 | 59.2 | FALSE | 0.064 | TRUE | 31.1 | 78.6 | TRUE | 0.7 | 6.1 | FALSE | 60 |
| 07/102017 16 | 0 | 0 | 61.2 | FALSE | 0.064 | TRUE | 31.1 | 81.2 | TRUE | 0.7 | 6.3 | FALSE | 60 |
| 07/102017 17 | 0 | 0 | 340 | FALSE | 0.064 | TRUE | 31.1 | 83.1 | TRUE | 3.8 | 34.9 | FALSE | 60 |
| 07/102017 18 | 0 | 0 | 521.5 | TRUE | 0.064 | TRUE | 0 | 0 | FALSE | 5.8 | 53.5 | TRUE | 60 |
| 07/102017 19 | 0 | 0 | 525.7 | TRUE | 0.064 | TRUE | 0 | 0 | FALSE | 5.8 | 53.9 | TRUE | 60 |
| 07/102017 20 | 0 | 0 | 528.3 | TRUE | 0.064 | TRUE | 0 | 0 | FALSE | 5.8 | 54.2 | TRUE | 60 |
| 07/102017 21 | 0 | 0 | 526.9 | TRUE | 0.064 | TRUE | 0 | 0 | FALSE | 5.8 | 54.1 | TRUE | 60 |
| 07/102017 22 | 0 | 0 | 529.1 | TRUE | 0.064 | TRUE | 0 | 0 | FALSE | 5.8 | 54.3 | TRUE | 60 |
| 07/102017 23 | 0 | 0 | 529.2 | TRUE | 0.064 | TRUE | 0 | 0 | FALSE | 5.8 | 54.3 | TRUE | 60 |
| 07/112017 00 | 0 | 0 | 540.4 | TRUE | 0.064 | TRUE | 0.3 | 0.8 | FALSE | 5.8 | 55.4 | TRUE | 60 |
| 07/112017 01 | 0 | 0 | 581.6 | TRUE | 0.064 | TRUE | 1.1 | 3.3 | FALSE | 5.8 | 59.7 | TRUE | 60 |
| 07/112017 02 | 0 | 0 | 586.7 | TRUE | 0.064 | TRUE | 0.6 | 1.8 | FALSE | 5.8 | 60.2 | TRUE | 60 |
| 07/112017 03 | 0 | 0 | 595.2 | TRUE | 0.064 | TRUE | 0.7 | 2.1 | FALSE | 5.8 | 61.1 | TRUE | 60 |
| 07/112017 04 | 0 | 9 | 593.2 | TRUE | 0.064 | TRUE | 40.8 | 124.7 | FALSE | 5.8 | 60.9 | TRUE | 60 |
| 07/112017 05 | 0 | 16 | 583.2 | TRUE | 0.064 | TRUE | 101.5 | 305 | FALSE | 5.8 | 59.8 | TRUE | 60 |
| 07/112017 06 | 0 | 44 | 579 | TRUE | 0.288 | TRUE | 189.8 | 566.2 | FALSE | 5.8 | 59.4 | TRUE | 60 |
| 07/112017 07 | 0 | 65 | 600.6 | TRUE | 0.536 | TRUE | 275.2 | 851.5 | TRUE | 5.8 | 61.6 | TRUE | 60 |
| 07/112017 08 | 0 | 88 | 936.8 | FALSE | 0.342 | FALSE | 360.6 | 1310.9 | FALSE | 7.7 | 96.1 | FALSE | 60 |
| 07/112017 09 | 0 | 111 | 1046.9 | FALSE | 0.419 | FALSE | 411.1 | 1648.7 | FALSE | 7.8 | 107.4 | FALSE | 60 |
| 07/112017 10 | 0 | 101 | 951.9 | FALSE | 0.443 | FALSE | 443 | 1657.9 | FALSE | 7.6 | 97.7 | FALSE | 60 |
| 07/112017 11 | 0 | 99 | 946.7 | FALSE | 0.443 | FALSE | 444.9 | 1656 | FALSE | 7.6 | 97.1 | FALSE | 60 |
| 07/112017 12 | 0 | 117 | 1051.6 | FALSE | 0.479 | FALSE | 462.8 | 1888.6 | FALSE | 7.7 | 107.9 | FALSE | 60 |
| 07/112017 13 | 0 | 136 | 1187.9 | FALSE | 0.528 | FALSE | 463.3 | 2081.7 | FALSE | 7.9 | 121.9 | FALSE | 60 |
| 07/112017 14 | 0 | 139 | 1197.4 | FALSE | 0.52 | FALSE | 473 | 2115.4 | FALSE | 8 | 122.9 | FALSE | 60 |
| 07/112017 15 | 0 | 140 | 1184.2 | FALSE | 0.525 | FALSE | 482.9 | 2135.9 | FALSE | 8 | 121.5 | FALSE | 60 |
| 07/112017 16 | 0 | 140 | 1206.6 | FALSE | 0.512 | FALSE | 485.9 | 2136.3 | FALSE | 8.2 | 123.8 | FALSE | 60 |
| 07/112017 17 | 0 | 140 | 1184.2 | FALSE | 0.524 | FALSE | 486.2 | 2150.4 | FALSE | 8 | 121.5 | FALSE | 60 |
| 07/112017 18 | 0 | 134 | 1160.4 | FALSE | 0.51 | FALSE | 487.3 | 2111.9 | FALSE | 8 | 119.1 | FALSE | 60 |
| 07/112017 19 | 0 | 115 | 1049.9 | FALSE | 0.528 | FALSE | 481.4 | 1936.2 | FALSE | 7.8 | 107.7 | FALSE | 60 |
| 07/112017 20 | 0 | 119 | 1096.7 | FALSE | 0.506 | FALSE | 485.6 | 1989.1 | FALSE | 8 | 112.5 | FALSE | 60 |
| 07/112017 21 | 0 | 107 | 989.7 | FALSE | 0.526 | FALSE | 458.9 | 1785.6 | FALSE | 7.6 | 101.5 | FALSE | 60 |
| 07/112017 22 | 0 | 99 | 917.7 | FALSE | 0.516 | FALSE | 450 | 1690.3 | FALSE | 7.3 | 94.2 | FALSE | 60 |
| 07/112017 23 | 0 | 100 | 946.5 | FALSE | 0.506 | FALSE | 448.4 | 1690.8 | FALSE | 7.5 | 97.1 | FALSE | 60 |
| 07/122017 00 | 0 | 100 | 950.8 | FALSE | 0.502 | FALSE | 442.2 | 1675.1 | FALSE | 7.5 | 97.6 | FALSE | 60 |
| 07/122017 01 | 0 | 100 | 954.5 | FALSE | 0.507 | FALSE | 437.6 | 1664 | FALSE | 7.5 | 97.9 | FALSE | 60 |
| 07/122017 02 | 0 | 100 | 954.7 | FALSE | 0.508 | FALSE | 430.1 | 1635.9 | FALSE | 7.5 | 98 | FALSE | 60 |
| 07/122017 03 | 0 | 100 | 960.2 | FALSE | 0.51 | FALSE | 424.6 | 1624.3 | FALSE | 7.5 | 98.5 | FALSE | 60 |
| 07/122017 04 | 0 | 100 | 960.9 | FALSE | 0.51 | FALSE | 417.6 | 1598.7 | FALSE | 7.5 | 98.6 | FALSE | 60 |
| 07/122017 05 | 0 | 100 | 948.4 | FALSE | 0.515 | FALSE | 404.7 | 1549.8 | FALSE | 7.4 | 97.3 | FALSE | 60 |
| 07/122017 06 | 0 | 100 | 948.3 | FALSE | 0.519 | FALSE | 400.5 | 1533.5 | FALSE | 7.4 | 97.3 | FALSE | 60 |
| 07/122017 07 | 0 | 100 | 947.5 | FALSE | 0.522 | FALSE | 395.6 | 1513.6 | FALSE | 7.4 | 97.2 | FALSE | 60 |
| 07/122017 08 | 0 | 100 | 958.5 | FALSE | 0.515 | FALSE | 396.3 | 1513.3 | FALSE | 7.5 | 98.3 | FALSE | 60 |

| | | | | | | | |
|---------------|-----|-----|--------|-------|-------|-------|-------|
| 07/12/2017 09 | 0 | 100 | 991.9 | FALSE | 0.493 | FALSE | FALSE |
| 07/12/2017 10 | 0 | 100 | 1001 | FALSE | 0.49 | FALSE | FALSE |
| 07/12/2017 11 | 0 | 100 | 971.9 | FALSE | 0.509 | FALSE | FALSE |
| 07/12/2017 12 | 0 | 102 | 992 | FALSE | 0.506 | FALSE | FALSE |
| 07/12/2017 13 | 0 | 114 | 895.3 | TRUE | 0.507 | TRUE | TRUE |
| 07/12/2017 14 | 0 | 129 | 926.4 | TRUE | 0.511 | TRUE | TRUE |
| 07/12/2017 15 | 0 | 142 | 961.6 | TRUE | 0.511 | TRUE | TRUE |
| 07/12/2017 16 | 0 | 147 | 1020.7 | TRUE | 0.511 | TRUE | TRUE |
| 07/12/2017 17 | 0 | 147 | 1018.5 | TRUE | 0.511 | TRUE | TRUE |
| 07/12/2017 18 | 0 | 147 | 1305.7 | TRUE | 0.511 | TRUE | TRUE |
| 07/12/2017 19 | 0 | 147 | 1425.5 | TRUE | 0.511 | TRUE | TRUE |
| 07/12/2017 20 | 0 | 148 | 1434.8 | TRUE | 0.475 | TRUE | TRUE |
| 07/12/2017 21 | 0 | 144 | 1430.7 | TRUE | 0.511 | TRUE | TRUE |
| 07/12/2017 22 | 0 | 102 | 1223.8 | TRUE | 0.507 | TRUE | TRUE |
| 07/12/2017 23 | 0 | 99 | 1215.4 | TRUE | 0.507 | TRUE | TRUE |
| 07/13/2017 00 | 0 | 98 | 1218.6 | TRUE | 0.507 | TRUE | TRUE |
| 07/13/2017 01 | 0 | 98 | 1284.8 | TRUE | 0.507 | TRUE | TRUE |
| 07/13/2017 02 | 0 | 98 | 1318.8 | TRUE | 0.507 | TRUE | TRUE |
| 07/13/2017 03 | 0 | 98 | 1324.3 | TRUE | 0.507 | TRUE | TRUE |
| 07/13/2017 04 | 0 | 98 | 1324.3 | TRUE | 0.507 | TRUE | TRUE |
| 07/13/2017 05 | 0 | 98 | 1308.1 | TRUE | 0.507 | TRUE | TRUE |
| 07/13/2017 06 | 0 | 98 | 1303.5 | TRUE | 0.507 | TRUE | TRUE |
| 07/13/2017 07 | 0 | 98 | 1300.8 | TRUE | 0.507 | TRUE | TRUE |
| 07/13/2017 08 | 0 | 100 | 1303.3 | TRUE | 0.507 | TRUE | TRUE |
| 07/13/2017 09 | 0 | 129 | 1471.4 | TRUE | 0.511 | TRUE | TRUE |
| 07/13/2017 10 | 0 | 145 | 1546.2 | TRUE | 0.511 | TRUE | TRUE |
| 07/13/2017 11 | 0 | 146 | 1537 | TRUE | 0.511 | TRUE | TRUE |
| 07/13/2017 12 | 0 | 146 | 1280.9 | FALSE | 0.48 | FALSE | FALSE |
| 07/13/2017 13 | 0 | 145 | 1280.9 | FALSE | 0.457 | FALSE | FALSE |
| 07/13/2017 14 | 0 | 144 | 1324.8 | FALSE | 0.439 | FALSE | FALSE |
| 07/13/2017 15 | 0 | 144 | 1349.8 | FALSE | 0.443 | FALSE | FALSE |
| 07/13/2017 16 | 34 | 144 | 1627.7 | FALSE | 0.438 | FALSE | FALSE |
| 07/13/2017 17 | 52 | 144 | 1800.9 | FALSE | 0.419 | FALSE | FALSE |
| 07/13/2017 18 | 68 | 143 | 2029.2 | FALSE | 0.397 | FALSE | FALSE |
| 07/13/2017 19 | 84 | 143 | 2245.9 | FALSE | 0.418 | FALSE | FALSE |
| 07/13/2017 20 | 102 | 143 | 2399.8 | FALSE | 0.463 | FALSE | FALSE |
| 07/13/2017 21 | 101 | 135 | 2287.5 | FALSE | 0.462 | FALSE | FALSE |
| 07/13/2017 22 | 100 | 104 | 2019.9 | FALSE | 0.47 | FALSE | FALSE |
| 07/13/2017 23 | 100 | 99 | 1991.6 | FALSE | 0.477 | FALSE | FALSE |
| 07/14/2017 00 | 100 | 98 | 1971 | FALSE | 0.49 | FALSE | FALSE |
| 07/14/2017 01 | 100 | 98 | 1972.4 | FALSE | 0.494 | FALSE | FALSE |
| 07/14/2017 02 | 101 | 98 | 1880.5 | FALSE | 0.497 | FALSE | FALSE |
| 07/14/2017 03 | 101 | 98 | 1884.6 | FALSE | 0.497 | FALSE | FALSE |
| 07/14/2017 04 | 101 | 98 | 1886.4 | FALSE | 0.498 | FALSE | FALSE |
| 07/14/2017 05 | 101 | 99 | 1962.6 | FALSE | 0.502 | FALSE | FALSE |
| 07/14/2017 06 | 101 | 99 | 1984.9 | FALSE | 0.495 | FALSE | FALSE |
| 07/14/2017 07 | 101 | 99 | 1985 | FALSE | 0.496 | FALSE | FALSE |
| 07/14/2017 08 | 101 | 100 | 1991 | FALSE | 0.496 | FALSE | FALSE |
| 07/14/2017 09 | 130 | 136 | 2862.9 | FALSE | 0.471 | FALSE | FALSE |
| 07/14/2017 10 | 147 | 145 | 2755 | FALSE | 0.479 | FALSE | FALSE |
| 07/14/2017 11 | 147 | 145 | 2761.4 | FALSE | 0.473 | FALSE | FALSE |
| 07/14/2017 12 | 147 | 145 | 2744.1 | FALSE | 0.468 | FALSE | FALSE |
| 07/14/2017 13 | 147 | 145 | 2732.9 | FALSE | 0.466 | FALSE | FALSE |
| 07/14/2017 14 | 146 | 144 | 2745.3 | FALSE | 0.459 | FALSE | FALSE |
| 07/14/2017 15 | 144 | 144 | 2730.5 | FALSE | 0.437 | FALSE | FALSE |
| 07/14/2017 16 | 136 | 135 | 2543.6 | FALSE | 0.44 | FALSE | FALSE |
| 07/14/2017 17 | 121 | 120 | 2322.2 | FALSE | 0.428 | FALSE | FALSE |
| 07/14/2017 18 | 125 | 124 | 2369.6 | FALSE | 0.442 | FALSE | FALSE |
| 07/14/2017 19 | 108 | 101 | 2047.6 | FALSE | 0.45 | FALSE | FALSE |

| | | | | | | |
|-------|--------|-------|-----|-------|-------|----|
| 395.5 | 1502.9 | FALSE | 78 | 101.8 | FALSE | 60 |
| 394 | 1491.7 | FALSE | 79 | 102.7 | FALSE | 60 |
| 391.8 | 1477.7 | FALSE | 77 | 99.7 | FALSE | 60 |
| 392.3 | 1490.8 | FALSE | 78 | 101.8 | FALSE | 60 |
| 336.9 | 1365.6 | TRUE | 66 | 91.9 | TRUE | 60 |
| 336.9 | 1413 | TRUE | 66 | 95 | TRUE | 60 |
| 336.9 | 1466.6 | TRUE | 66 | 98.7 | TRUE | 60 |
| 336.9 | 1556.7 | TRUE | 66 | 104.7 | TRUE | 60 |
| 336.9 | 1553.4 | TRUE | 66 | 104.5 | TRUE | 60 |
| 336.9 | 1991.6 | TRUE | 66 | 134 | TRUE | 60 |
| 336.9 | 2174.3 | TRUE | 66 | 146.3 | TRUE | 60 |
| 336.9 | 2188.4 | TRUE | 66 | 147.2 | TRUE | 60 |
| 336.9 | 2182.2 | TRUE | 66 | 146.8 | TRUE | 60 |
| 336.9 | 1866.6 | TRUE | 66 | 125.6 | TRUE | 60 |
| 336.9 | 1853.8 | TRUE | 66 | 124.7 | TRUE | 60 |
| 336.9 | 1858.7 | TRUE | 66 | 125 | TRUE | 60 |
| 336.9 | 1959.6 | TRUE | 66 | 131.8 | TRUE | 60 |
| 336.9 | 2011.4 | TRUE | 66 | 135.3 | TRUE | 60 |
| 336.9 | 2019.9 | TRUE | 66 | 135.9 | TRUE | 60 |
| 336.9 | 2019.8 | TRUE | 66 | 135.9 | TRUE | 60 |
| 336.9 | 1995.2 | TRUE | 66 | 134.2 | TRUE | 60 |
| 336.9 | 1988.2 | TRUE | 66 | 133.7 | TRUE | 60 |
| 336.9 | 1984 | TRUE | 66 | 133.5 | TRUE | 60 |
| 336.9 | 1987.9 | TRUE | 66 | 133.7 | TRUE | 60 |
| 336.9 | 2244.2 | TRUE | 66 | 151 | TRUE | 60 |
| 336.9 | 2358.4 | TRUE | 66 | 158.6 | TRUE | 60 |
| 336.9 | 2344.3 | TRUE | 66 | 157.7 | TRUE | 60 |
| 281.4 | 1994.5 | FALSE | 5.4 | 131.4 | FALSE | 60 |
| 285.2 | 2021.3 | FALSE | 5.4 | 131.4 | FALSE | 60 |
| 299.1 | 2114.3 | FALSE | 5.6 | 135.9 | FALSE | 60 |
| 290.1 | 2052.7 | FALSE | 5.7 | 138.5 | FALSE | 60 |
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| 377.8 | 2675 | FALSE | 7.6 | 184.8 | FALSE | 60 |
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| 502.4 | 3920.4 | FALSE | 8.6 | 230.4 | FALSE | 60 |
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| 522.9 | 4793.8 | FALSE | 9 | 283.3 | FALSE | 60 |
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| 539.4 | 4732 | FALSE | 9.3 | 280.1 | FALSE | 60 |
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| 501 | 3523.2 | FALSE | 8.7 | 210.1 | FALSE | 60 |

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| 07/19/2017 18 | 137 | 145 | 2642.6 | FALSE | 0.437 | FALSE | |
| 07/19/2017 19 | 137 | 146 | 2636.3 | FALSE | 0.434 | FALSE | |
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| 07/19/2017 21 | 136 | 145 | 2628.8 | FALSE | 0.428 | FALSE | |
| 07/19/2017 22 | 135 | 145 | 2622.2 | FALSE | 0.426 | FALSE | |
| 07/19/2017 23 | 119 | 120 | 2265.8 | FALSE | 0.415 | FALSE | |
| 07/20/2017 00 | 96 | 98 | 1905.6 | FALSE | 0.395 | FALSE | |
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| 07/20/2017 05 | 98 | 99 | 1879.5 | FALSE | 0.426 | FALSE | |
| 07/20/2017 06 | 114 | 114 | 2136 | FALSE | 0.427 | FALSE | |
| 07/20/2017 07 | 135 | 137 | 2541.3 | FALSE | 0.447 | FALSE | |
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| 07/20/2017 09 | 135 | 145 | 2572.4 | FALSE | 0.469 | FALSE | |
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| 07/20/2017 11 | 134 | 144 | 2583.7 | FALSE | 0.461 | FALSE | |
| 07/20/2017 12 | 134 | 144 | 2576.7 | FALSE | 0.464 | FALSE | |
| 07/20/2017 13 | 135 | 144 | 2584 | FALSE | 0.468 | FALSE | |
| 07/20/2017 14 | 132 | 148 | 2595.5 | FALSE | 0.47 | FALSE | |
| 07/20/2017 15 | 116 | 145 | 2407.6 | FALSE | 0.482 | FALSE | |
| 07/20/2017 16 | 125 | 145 | 2525.9 | FALSE | 0.466 | FALSE | |
| 07/20/2017 17 | 136 | 146 | 2592.6 | FALSE | 0.47 | FALSE | |
| 07/20/2017 18 | 136 | 146 | 2609.6 | FALSE | 0.473 | FALSE | |
| 07/20/2017 19 | 137 | 146 | 2619.6 | FALSE | 0.472 | FALSE | |
| 07/20/2017 20 | 137 | 146 | 2615.9 | FALSE | 0.471 | FALSE | |
| 07/20/2017 21 | 137 | 146 | 2616.5 | FALSE | 0.467 | FALSE | |
| 07/20/2017 22 | 113 | 113 | 2124.9 | FALSE | 0.437 | FALSE | |
| 07/20/2017 23 | 96 | 97 | 1877.8 | FALSE | 0.4 | FALSE | |
| 07/21/2017 00 | 96 | 98 | 1908.5 | FALSE | 0.396 | FALSE | |
| 07/21/2017 01 | 98 | 96 | 1894.8 | FALSE | 0.409 | FALSE | |
| 07/21/2017 02 | 98 | 97 | 1886 | FALSE | 0.419 | FALSE | |
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| 07/21/2017 04 | 98 | 98 | 1896.9 | FALSE | 0.433 | FALSE | |
| 07/21/2017 05 | 110 | 111 | 2094.6 | FALSE | 0.463 | FALSE | |
| 07/21/2017 06 | 134 | 142 | 2562.9 | FALSE | 0.471 | FALSE | |
| 07/21/2017 07 | 136 | 145 | 2589.3 | FALSE | 0.462 | FALSE | |
| 07/21/2017 08 | 136 | 145 | 2610.2 | FALSE | 0.453 | FALSE | |
| 07/21/2017 09 | 135 | 144 | 2593.4 | FALSE | 0.448 | FALSE | |
| 07/21/2017 10 | 136 | 144 | 2613.9 | FALSE | 0.441 | FALSE | |
| 07/21/2017 11 | 135 | 144 | 2589.4 | FALSE | 0.453 | FALSE | |
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| 07/21/2017 13 | 136 | 144 | 2600 | FALSE | 0.455 | FALSE | |
| 07/21/2017 14 | 137 | 144 | 2604.5 | FALSE | 0.458 | FALSE | |
| 07/21/2017 15 | 136 | 144 | 2619.7 | FALSE | 0.45 | FALSE | |
| 07/21/2017 16 | 136 | 145 | 2628.2 | FALSE | 0.458 | FALSE | |
| 07/21/2017 17 | 137 | 146 | 2610.4 | FALSE | 0.465 | FALSE | |
| 07/21/2017 18 | 137 | 146 | 2615.8 | FALSE | 0.467 | FALSE | |
| 07/21/2017 19 | 138 | 146 | 2627.8 | FALSE | 0.47 | FALSE | |
| 07/21/2017 20 | 138 | 147 | 2626 | FALSE | 0.472 | FALSE | |
| 07/21/2017 21 | 138 | 146 | 2626.9 | FALSE | 0.467 | FALSE | |
| 07/21/2017 22 | 112 | 115 | 2108.8 | FALSE | 0.453 | FALSE | |
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| 07/22/2017 00 | 96 | 97 | 1894.8 | FALSE | 0.41 | FALSE | |
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| 07/22/2017 02 | 98 | 96 | 1892.7 | FALSE | 0.426 | FALSE | |
| 07/22/2017 03 | 99 | 98 | 1898.2 | FALSE | 0.447 | FALSE | |
| 07/22/2017 04 | 100 | 98 | 1909.9 | FALSE | 0.454 | FALSE | |

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| 520.4 | 4571.4 | FALSE | 8.9 | 268.5 | FALSE | 60 |
| 500.6 | 3739.3 | FALSE | 8.5 | 218 | FALSE | 60 |
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| 480.6 | 3325.5 | FALSE | 8.2 | 194.8 | FALSE | 60 |
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| 527 | 4624.8 | FALSE | 8.9 | 268.2 | FALSE | 60 |
| 527.1 | 4634.5 | FALSE | 8.8 | 265.7 | FALSE | 60 |
| 526.6 | 4643.6 | FALSE | 8.8 | 266.5 | FALSE | 60 |
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| 529.7 | 4694.9 | FALSE | 8.8 | 267.8 | FALSE | 60 |
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| 527.3 | 4701.6 | FALSE | 8.8 | 269.4 | FALSE | 60 |
| 527.4 | 4704.2 | FALSE | 8.8 | 269.5 | FALSE | 60 |
| 493.6 | 3747.3 | FALSE | 8.3 | 216.4 | FALSE | 60 |
| 486.5 | 3324 | FALSE | 8.2 | 192.4 | FALSE | 60 |
| 489.3 | 3337.6 | FALSE | 8.3 | 194.4 | FALSE | 60 |
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| 484.1 | 3338.8 | FALSE | 8.2 | 194.2 | FALSE | 60 |
| 476.9 | 3339.4 | FALSE | 8.1 | 194.8 | FALSE | 60 |
| 472.5 | 3329 | FALSE | 8.1 | 196 | FALSE | 60 |

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|---------------|-----|-----|--------|-------|-------|-------|-------|--------|-------|-----|-------|-------|----|
| 07/22/2017 05 | 100 | 98 | 1889.4 | FALSE | 0.453 | FALSE | 469.4 | 3312.6 | FALSE | 8 | 193.9 | FALSE | 60 |
| 07/22/2017 06 | 99 | 98 | 1893.4 | FALSE | 0.447 | FALSE | 473.9 | 3310 | FALSE | 8.1 | 194.3 | FALSE | 60 |
| 07/22/2017 07 | 98 | 98 | 1881.5 | FALSE | 0.444 | FALSE | 474.9 | 3296.1 | FALSE | 8.1 | 193 | FALSE | 60 |
| 07/22/2017 08 | 99 | 98 | 1871.5 | FALSE | 0.441 | FALSE | 476.9 | 3297.6 | FALSE | 8.1 | 192.3 | FALSE | 60 |
| 07/22/2017 09 | 110 | 106 | 2036.3 | FALSE | 0.435 | FALSE | 492.6 | 3611.1 | FALSE | 8.3 | 208.9 | FALSE | 60 |
| 07/22/2017 10 | 119 | 120 | 2256.7 | FALSE | 0.468 | FALSE | 502.8 | 3988.6 | FALSE | 8.5 | 231.5 | FALSE | 60 |
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| 07/22/2017 18 | 138 | 146 | 2614.7 | FALSE | 0.462 | FALSE | 528.5 | 4692.1 | FALSE | 8.8 | 268.3 | FALSE | 60 |
| 07/22/2017 19 | 138 | 146 | 2639.9 | FALSE | 0.451 | FALSE | 536.6 | 4755.8 | FALSE | 8.9 | 270.9 | FALSE | 60 |
| 07/22/2017 20 | 139 | 146 | 2640.4 | FALSE | 0.453 | FALSE | 540.7 | 4793.2 | FALSE | 8.9 | 270.9 | FALSE | 60 |
| 07/22/2017 21 | 104 | 114 | 2024.5 | FALSE | 0.43 | FALSE | 503.6 | 3670.4 | FALSE | 8.3 | 207.7 | FALSE | 60 |
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| 07/22/2017 23 | 99 | 97 | 1900 | FALSE | 0.405 | FALSE | 508.2 | 3476 | FALSE | 8.3 | 194.9 | FALSE | 60 |
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| 07/23/2017 01 | 98 | 97 | 1888.6 | FALSE | 0.428 | FALSE | 506.4 | 3484.9 | FALSE | 8.2 | 193.8 | FALSE | 60 |
| 07/23/2017 02 | 97 | 98 | 1861.5 | FALSE | 0.437 | FALSE | 509 | 3495.3 | FALSE | 8.1 | 191 | FALSE | 60 |
| 07/23/2017 03 | 96 | 98 | 1856.4 | FALSE | 0.441 | FALSE | 515.3 | 3528.8 | FALSE | 8.1 | 190.5 | FALSE | 60 |
| 07/23/2017 04 | 97 | 98 | 1860.5 | FALSE | 0.443 | FALSE | 520.5 | 3572.3 | FALSE | 8.1 | 190.9 | FALSE | 60 |
| 07/23/2017 05 | 98 | 98 | 1865.7 | FALSE | 0.439 | FALSE | 529.4 | 3643.4 | FALSE | 8.1 | 191.4 | FALSE | 60 |
| 07/23/2017 06 | 98 | 98 | 1872 | FALSE | 0.44 | FALSE | 530.2 | 3661.3 | FALSE | 8.1 | 192.1 | FALSE | 60 |
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| 07/23/2017 08 | 98 | 98 | 1885.3 | FALSE | 0.434 | FALSE | 540.7 | 3714.5 | FALSE | 8.2 | 193.4 | FALSE | 60 |
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| 07/23/2017 13 | 135 | 144 | 2549.9 | FALSE | 0.481 | FALSE | 586 | 5132 | FALSE | 8.7 | 261.6 | FALSE | 60 |
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| 07/23/2017 15 | 135 | 144 | 2558.6 | FALSE | 0.471 | FALSE | 592 | 5143.2 | FALSE | 8.8 | 262.5 | FALSE | 60 |
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| 07/23/2017 17 | 125 | 119 | 2260.4 | FALSE | 0.452 | FALSE | 581.9 | 4570 | FALSE | 8.6 | 231.9 | FALSE | 60 |
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| 07/24/2017 03 | 100 | 98 | 1898.3 | FALSE | 0.432 | FALSE | 553.5 | 3828.7 | FALSE | 8.2 | 194.8 | FALSE | 60 |
| 07/24/2017 04 | 101 | 98 | 1902.1 | FALSE | 0.435 | FALSE | 552.5 | 3829.4 | FALSE | 8.2 | 195.2 | FALSE | 60 |
| 07/24/2017 05 | 101 | 98 | 1877.4 | FALSE | 0.442 | FALSE | 548 | 3795.1 | FALSE | 8.1 | 192.6 | FALSE | 60 |
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| 07/24/2017 07 | 101 | 99 | 1898.8 | FALSE | 0.433 | FALSE | 552.4 | 3822.1 | FALSE | 8.2 | 194.8 | FALSE | 60 |
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| 07/24/2017 09 | 100 | 98 | 1895.6 | FALSE | 0.433 | FALSE | 544.7 | 3762.4 | FALSE | 8.2 | 194.5 | FALSE | 60 |
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| 469.4 | 3312.6 | FALSE | 8 | 193.9 | FALSE | 6 |
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| 492.6 | 3611.1 | FALSE | 8.3 | 208.9 | FALSE | 60 |
| 502.8 | 3988.6 | FALSE | 8.5 | 231.5 | FALSE | 60 |
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| 529 | 4607.9 | FALSE | 8.9 | 266.2 | FALSE | 60 |
| 531.9 | 4620.3 | FALSE | 8.9 | 265.5 | FALSE | 60 |
| 531.9 | 4619.5 | FALSE | 8.9 | 265.4 | FALSE | 60 |
| 530.3 | 4620.9 | FALSE | 8.9 | 266.3 | FALSE | 60 |
| 528.9 | 4669.5 | FALSE | 8.9 | 269.8 | FALSE | 60 |
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| 552.5 | 3829.4 | FALSE | 8.2 | 195.2 | FALSE | 60 |
| 548 | 3795.1 | FALSE | 8.1 | 192.6 | FALSE | 60 |
| 548.8 | 3801.9 | FALSE | 8.1 | 192.7 | FALSE | 60 |
| 552.4 | 3822.1 | FALSE | 8.2 | 194.8 | FALSE | 60 |
| 548.6 | 3793.9 | FALSE | 8.2 | 194.7 | FALSE | 60 |
| 544.7 | 3762.4 | FALSE | 8.2 | 194.5 | FALSE | 60 |
| 542.6 | 3751.5 | FALSE | 8.2 | 194.7 | FALSE | 60 |
| 541.4 | 3800.3 | FALSE | 8.2 | 197.6 | FALSE | 60 |
| 545.1 | 4294.7 | FALSE | 8.4 | 227.2 | FALSE | 60 |
| 552.9 | 4429 | FALSE | 8.5 | 233.8 | FALSE | 60 |
| 539 | 4332.8 | FALSE | 8.3 | 229.1 | FALSE | 60 |
| 558.5 | 4783.8 | FALSE | 8.6 | 252.9 | FALSE | 60 |

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|--|-----|------|--------|-------|-------|-------|
| 07/24/2017 16 07/24/2017 17 07/24/2017 18 07/24/2017 19 07/24/2017 20 07/24/2017 21 07/24/2017 22 07/24/2017 23 07/25/2017 00 07/25/2017 01 07/25/2017 02 07/25/2017 03 07/25/2017 04 07/25/2017 05 07/25/2017 06 07/25/2017 07 07/25/2017 08 07/25/2017 09 07/25/2017 10 07/25/2017 11 07/25/2017 12 07/25/2017 13 07/25/2017 14 07/25/2017 15 07/25/2017 16 07/25/2017 17 07/25/2017 18 07/25/2017 19 07/25/2017 20 07/25/2017 21 07/25/2017 22 07/25/2017 23 | 130 | 112 | 2234.8 | FALSE | 0.42 | FALSE |
| | 127 | 124 | 2317.3 | FALSE | 0.482 | FALSE |
| | 126 | 127 | 2329.1 | FALSE | 0.448 | FALSE |
| | 120 | 116 | 2200.3 | FALSE | 0.45 | FALSE |
| | 119 | 114 | 2200.4 | FALSE | 0.447 | FALSE |
| | 119 | 114 | 2199.4 | FALSE | 0.454 | FALSE |
| | 119 | 114 | 2196.7 | FALSE | 0.453 | FALSE |
| | 109 | 116 | 2095.9 | FALSE | 0.41 | FALSE |
| | 110 | 131 | 2163.3 | FALSE | 0.392 | FALSE |
| | 111 | 130 | 2175.1 | FALSE | 0.394 | FALSE |
| | 87 | 129 | 1959.6 | FALSE | 0.378 | FALSE |
| | 84 | 122 | 1865.2 | FALSE | 0.339 | FALSE |
| | 85 | 110 | 1778.1 | FALSE | 0.292 | FALSE |
| | 86 | 112 | 1787.9 | FALSE | 0.316 | FALSE |
| | 81 | 94 | 1623.3 | FALSE | 0.281 | FALSE |
| | 70 | 56 | 1283.6 | FALSE | 0.29 | FALSE |
| | 47 | 31 | 859.4 | FALSE | 0.3 | FALSE |
| | 41 | 34 | 844.4 | FALSE | 0.294 | FALSE |
| | 48 | 44 | 993.3 | FALSE | 0.251 | FALSE |
| | 49 | 44 | 1013.9 | FALSE | 0.244 | FALSE |
| | 50 | 16 | 724 | FALSE | 0.198 | FALSE |
| | 49 | 0 | 502.4 | FALSE | 0.129 | FALSE |
| | 5 | 0 | 480.5 | FALSE | 0.127 | FALSE |
| 0 | 0 | 48.8 | FALSE | 0 | FALSE | |
| 0 | 0 | 51.6 | FALSE | 0 | FALSE | |
| 0 | 0 | 48 | FALSE | 0 | FALSE | |
| 0 | 0 | 46.8 | FALSE | 0.001 | FALSE | |
| 0 | 0 | 45.8 | FALSE | 0 | FALSE | |
| 0 | 0 | 44.5 | FALSE | 0 | FALSE | |
| 0 | 0 | 35.9 | FALSE | 0 | FALSE | |
| 0 | 0 | 17.4 | FALSE | 0 | FALSE | |
| 0 | 0 | 16.8 | FALSE | 0 | FALSE | |
| 0 | 0 | 2.2 | FALSE | 0.001 | FALSE | |
| 0 | 0 | 0.7 | FALSE | 0 | FALSE | |
| 0 | 0 | 0.7 | FALSE | 0 | FALSE | |
| 0 | 0 | 0.6 | FALSE | 0 | FALSE | |
| 0 | 0 | 15.6 | FALSE | 0.141 | FALSE | |
| 0 | 0 | 17.9 | FALSE | 0.151 | FALSE | |
| 0 | 0 | 0.3 | FALSE | 0 | FALSE | |
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| 0 | 0 | 0.2 | FALSE | 0 | FALSE | |
| 0 | 0 | 0.1 | FALSE | 0 | FALSE | |
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|------|-----|---------|-----|------|-----------|-----|-------|---------|-----|-----|-------|-----|----|-------|--------|----------|------|---------|--------|--------|-------|-------|
| 137 | 1 6 | 26215.8 | YES | 0.67 | 1221.5679 | YES | 1.79 | 692.7 5 | YES | 8.8 | 29.8 | YES | 60 | 10 72 | 0.0168 | 0.01377 | 3.31 | 0.00855 | 0.0789 | 125.06 | 15.63 | 52.11 |
| 138 | 1 6 | 26217.8 | YES | 0.7 | 1221.5679 | YES | 1.795 | 690.623 | YES | 8.8 | 29.86 | YES | 60 | 10 66 | 0.0168 | 0.01397 | 3.31 | 0.00858 | 0.0789 | 125.05 | 15.70 | 52.35 |
| 138 | 1 7 | 2626 | YES | 0.72 | 1229.72 | YES | 1.790 | 700.5 0 | YES | 8.8 | 29.8 | YES | 60 | 10 62 | 0.0168 | 0.0139 | 3.31 | 0.00858 | 0.0789 | 125.05 | 15.69 | 52.31 |
| 138 | 1 7 | 2626.9 | YES | 0.67 | 1226.762 | YES | 1.791 | 707.78 | YES | 8.8 | 29.95 | YES | 60 | 10 66 | 0.0168 | 0.01396 | 3.31 | 0.00857 | 0.0789 | 125.05 | 15.70 | 52.33 |
| 1115 | 11 | 2108.8 | YES | 0.53 | 955.86 | YES | 1.777 | 37.7338 | YES | 8.3 | 21.6 | YES | 60 | 8 02 | 0.0168 | 0.005229 | 3.31 | 0.00973 | 0.0789 | 100.82 | 12.60 | 2.01 |
| 96 | 99 | 1875.1 | YES | 0.13 | 77.16 | YES | 1.773 | 332.552 | YES | 8.3 | 21.62 | YES | 60 | 7 71 | 0.0168 | 0.005229 | 3.31 | 0.00973 | 0.0789 | 89.68 | 11.21 | 37.35 |
| 96 | 99 | 1875.1 | YES | 0.13 | 77.16 | YES | 1.773 | 332.552 | YES | 8.3 | 21.62 | YES | 60 | 7 71 | 0.0168 | 0.005229 | 3.31 | 0.00973 | 0.0789 | 89.68 | 11.21 | 37.35 |
| 96 | 99 | 1875.1 | YES | 0.13 | 77.16 | YES | 1.773 | 332.552 | YES | 8.3 | 21.62 | YES | 60 | 7 71 | 0.0168 | 0.005229 | 3.31 | 0.00973 | 0.0789 | 89.68 | 11.21 | 37.35 |
| 96 | 99 | 1875.1 | YES | 0.13 | 77.16 | YES | 1.773 | 332.552 | YES | 8.3 | 21.62 | YES | 60 | 7 71 | 0.0168 | 0.005229 | 3.31 | 0.00973 | 0.0789 | 89.68 | 11.21 | 37.35 |
| 96 | 99 | 1875.1 | YES | 0.13 | 77.16 | YES | 1.773 | 332.552 | YES | 8.3 | 21.62 | YES | 60 | 7 71 | 0.0168 | 0.005229 | 3.31 | 0.00973 | 0.0789 | 89.68 | 11.21 | 37.35 |
| 96 | 99 | 1875.1 | YES | 0.13 | 77.16 | YES | 1.773 | 332.552 | YES | 8.3 | 21.62 | YES | 60 | 7 71 | 0.0168 | 0.005229 | 3.31 | 0.00973 | 0.0789 | 89.68 | 11.21 | 37.35 |
| 96 | 99 | 1875.1 | YES | 0.13 | 77.16 | YES | 1.773 | 332.552 | YES | 8.3 | 21.62 | YES | 60 | 7 71 | 0.0168 | 0.005229 | 3.31 | 0.00973 | 0.0789 | 89.68 | 11.21 | 37.35 |
| 96 | 99 | 1875.1 | YES | 0.13 | 77.16 | YES | 1.773 | 332.552 | YES | 8.3 | 21.62 | YES | 60 | 7 71 | 0.0168 | 0.005229 | 3.31 | 0.00973 | 0.0789 | 89.68 | 11.21 | 37.35 |
| 96 | 99 | 1875.1 | YES | 0.13 | 77.16 | YES | 1.773 | 332.552 | YES | 8.3 | 21.62 | YES | 60 | 7 71 | 0.0168 | 0.005229 | 3.31 | 0.00973 | 0.0789 | 89.68 | 11.21 | 37.35 |
| 96 | 99 | 1875.1 | YES | 0.13 | 77.16 | YES | 1.773 | 332.552 | YES | 8.3 | 21.62 | YES | 60 | 7 71 | 0.0168 | 0.005229 | 3.31 | 0.00973 | 0.0789 | 89.68 | 11.21 | 37.35 |
| 96 | 99 | 1875.1 | YES | 0.13 | 77.16 | YES | 1.773 | 332.552 | YES | 8.3 | 21.62 | YES | 60 | 7 71 | 0.0168 | 0.005229 | 3.31 | 0.00973 | 0.0789 | 89.68 | 11.21 | 37.35 |
| 96 | 99 | 1875.1 | YES | 0.13 | 77.16 | YES | 1.773 | 332.552 | YES | 8.3 | 21.62 | YES | 60 | 7 71 | 0.0168 | 0.005229 | 3.31 | 0.00973 | 0.0789 | 89.68 | 11.21 | 37.35 |
| 96 | 99 | 1875.1 | YES | 0.13 | 77.16 | YES | 1.773 | 332.552 | YES | 8.3 | 21.62 | YES | 60 | 7 71 | 0.0168 | 0.005229 | 3.31 | 0.00973 | 0.0789 | 89.68 | 11.21 | 37.35 |
| 96 | 99 | 1875.1 | YES | 0.13 | 77.16 | YES | 1.773 | 332.552 | YES | 8.3 | 21.62 | YES | 60 | 7 71 | 0.0168 | 0.005229 | 3.31 | 0.00973 | 0.0789 | 89.68 | 11.21 | 37.35 |
| 96 | 99 | 1875.1 | YES | 0.13 | 77.16 | YES | 1.773 | 332.552 | YES | 8.3 | 21.62 | YES | 60 | 7 71 | 0.0168 | 0.005229 | 3.31 | 0.00973 | 0.0789 | 89.68 | 11.21 | 37.35 |
| 96 | 99 | 1875.1 | YES | 0.13 | 77.16 | YES | 1.773 | 332.552 | YES | 8.3 | 21.62 | YES | 60 | 7 71 | 0.0168 | 0.005229 | 3.31 | 0.00973 | 0.0789 | 89.68 | 11.21 | 37.35 |
| 96 | 99 | 1875.1 | YES | 0.13 | 77.16 | YES | 1.773 | 332.552 | YES | 8.3 | 21.62 | YES | 60 | 7 71 | 0.0168 | 0.005229 | 3.31 | 0.00973 | 0.0789 | 89.68 | 11.21 | 37.35 |
| 96 | 99 | 1875.1 | YES | 0.13 | 77.16 | YES | 1.773 | 332.552 | YES | 8.3 | 21.62 | YES | 60 | 7 71 | 0.0168 | 0.005229 | 3.31 | 0.00973 | 0.0789 | 89.68 | 11.21 | 37.35 |
| 96 | 99 | 1875.1 | YES | 0.13 | 77.16 | YES | 1.773 | 332.552 | YES | 8.3 | 21.62 | YES | 60 | 7 71 | 0.0168 | 0.005229 | 3.31 | 0.00973 | 0.0789 | 89.68 | 11.21 | 37.35 |
| 96 | 99 | 1875.1 | YES | 0.13 | 77.16 | YES | 1.773 | 332.552 | YES | 8.3 | 21.62 | YES | 60 | 7 71 | 0.0168 | 0.005229 | 3.31 | 0.00973 | 0.0789 | 89.68 | 11.21 | 37.35 |
| 96 | 99 | 1875.1 | YES | 0.13 | 77.16 | YES | 1.773 | 332.552 | YES | 8.3 | 21.62 | YES | 60 | 7 71 | 0.0168 | 0.005229 | 3.31 | 0.00973 | 0.0789 | 89.68 | 11.21 | 37.35 |
| 96 | 99 | 1875.1 | YES | 0.13 | 77.16 | YES | 1.773 | 332.552 | YES | 8.3 | 21.62 | YES | 60 | 7 71 | 0.0168 | 0.005229 | 3.31 | 0.00973 | 0.0789 | 89.68 | 11.21 | 37.35 |
| 96 | 99 | 1875.1 | YES | 0.13 | 77.16 | YES | 1.773 | 332.552 | YES | 8.3 | 21.62 | YES | 60 | 7 71 | 0.0168 | 0.005229 | 3.31 | 0.00973 | 0.0789 | 89.68 | 11.21 | 37.35 |
| 96 | 99 | 1875.1 | YES | 0.13 | 77.16 | YES | 1.773 | 332.552 | YES | 8.3 | 21.62 | YES | 60 | 7 71 | 0.0168 | 0.005229 | 3.31 | 0.00973 | 0.0789 | 89.68 | 11.21 | 37.35 |
| 96 | 99 | 1875.1 | YES | 0.13 | 77.16 | YES | 1.773 | 332.552 | YES | 8.3 | 21.62 | YES | 60 | 7 71 | 0.0168 | 0.005229 | 3.31 | 0.00973 | 0.0789 | 89.68 | 11.21 | 37.35 |
| 96 | 99 | 1875.1 | YES | 0.13 | 77.16 | YES | 1.773 | 332.552 | YES | 8.3 | 21.62 | YES | 60 | 7 71 | 0.0168 | 0.005229 | 3.31 | 0.00973 | 0.0789 | 89.68 | 11.21 | 37.35 |
| 96 | 99 | 1875.1 | YES | 0.13 | 77.16 | YES | 1.773 | 332.552 | YES | 8.3 | 21.62 | YES | 60 | 7 71 | 0.0168 | 0.005229 | 3.31 | 0.00973 | 0.0789 | 89.68 | 11.21 | 37.35 |
| 96 | 99 | 1875.1 | YES | 0.13 | 77.16 | YES | 1.773 | 332.552 | YES | 8.3 | 21.62 | YES | 60 | 7 71 | 0.0168 | 0.005229 | 3.31 | 0.00973 | 0.0789 | 89.68 | 11.21 | 37.35 |
| 96 | 99 | 1875.1 | YES | 0.13 | 77.16 | YES | 1.773 | 332.552 | YES | 8.3 | 21.62 | YES | 60 | 7 71 | 0.0168 | 0.005229 | 3.31 | 0.00973 | 0.0789 | 89.68 | 11.21 | 37.35 |
| 96 | 99 | 1875.1 | YES | 0.13 | 77.16 | YES | 1.773 | 332.552 | YES | 8.3 | 21.62 | YES | 60 | 7 71 | 0.0168 | 0.005229 | 3.31 | 0.00973 | 0.0789 | 89.68 | 11.21 | 37.35 |
| 96 | 99 | 1875.1 | YES | 0.13 | 77.16 | YES | 1.773 | 332.552 | YES | 8.3 | 21.62 | YES | 60 | 7 71 | 0.0168 | 0.005229 | 3.31 | 0.00973 | 0.0789 | 89.68 | 11.21 | 37.35 |
| 96 | 99 | 1875.1 | YES | 0.13 | 77.16 | YES | 1.773 | 332.552 | YES | 8.3 | 21.62 | YES | 60 | 7 71 | 0.0168 | 0.005229 | 3.31 | 0.00973 | 0.0789 | 89.68 | 11.21 | 37.35 |
| 96 | 99 | 1875.1 | YES | 0.13 | 77.16 | YES | 1.773 | 332.552 | YES | 8.3 | 21.62 | YES | 60 | 7 71 | 0.0168 | 0.005229 | 3.31 | 0.00973 | 0.0789 | 89.68 | 11.21 | 37.35 |
| 96 | 99 | 1875.1 | YES | 0.13 | 77.16 | YES | 1.773 | 332.552 | YES | 8.3 | 21.62 | YES | 60 | 7 71 | 0.0168 | 0.005229 | 3.31 | 0.00973 | 0.0789 | 89.68 | 11.21 | 37.35 |
| 96 | 99 | 1875.1 | YES | 0.13 | 77.16 | YES | 1.773 | 332.552 | YES | 8.3 | 21.62 | YES | 60 | 7 71 | 0.0168 | 0.005229 | 3.31 | 0.00973 | 0.0789 | 89.68 | 11.21 | 37.35 |
| 96 | 99 | 1875.1 | YES | 0.13 | 77.16 | YES | 1.773 | 332.552 | YES | 8.3 | 21.62 | YES | 60 | 7 71 | 0.0168 | 0.005229 | 3.31 | 0.00973 | 0.0789 | 89.68 | 11.21 | 37.35 |
| 96 | 99 | 1875.1 | YES | 0.13 | 77.16 | YES | 1.773 | 332.552 | YES | 8.3 | 21.62 | YES | 60 | 7 71 | 0.0168 | 0.005229 | 3.31 | 0.00973 | 0.0789 | 89.68 | 11.21 | 37.35 |
| 96 | 99 | 1875.1 | YES | 0.13 | 77.16 | YES | 1.773 | 332.552 | YES | 8.3 | 21.62 | YES | 60 | 7 71 | 0.0168 | 0.005229 | 3.31 | 0.00973 | 0.0789 | 89.68 | 11.21 | 37.35 |
| 96 | 99 | 1875.1 | YES | 0.13 | 77.16 | YES | 1.773 | 332.552 | YES | 8.3 | 21.62 | YES | 60 | 7 71 | 0.0168 | 0.005229 | 3.31 | 0.00973 | 0.0789 | 89.68 | 11.21 | 37.35 |
| 96 | 99 | 1875.1 | YES | 0.13 | 77.16 | YES | 1.773 | 332.552 | YES | 8.3 | 21.62 | YES | 60 | 7 71 | 0.0168 | 0.005229 | 3.31 | 0.00973 | 0.0789 | 89.68 | 11.21 | 37.35 |
| 96 | 99 | 1875.1 | YES | 0.13 | 77.16 | YES | 1.773 | 332.552 | YES | 8.3 | 21.62 | YES | 60 | 7 71 | 0.0168 | 0.005229 | 3.31 | 0.00973 | 0.0789 | 89.68 | 11.21 | 37.35 |
| 96 | 99 | 1875.1 | YES | 0.13 | 77.16 | YES | 1.773 | 332.552 | YES | 8.3 | 21.62 | YES | 60 | 7 71 | 0.0168 | 0.005229 | 3.31 | 0.00973 | 0.0789 | 89.68 | 11.21 | 37.35 |
| 96 | 99 | 1875.1 | YES | 0.13 | 77.16 | YES | 1.773 | 332.552 | YES | 8.3 | 21.62 | YES | 60 | 7 71 | 0.0168 | 0.005229 | 3.31 | 0.00973 | 0.0789 | 89.68 | 11.21 | 37.35 |
| 96 | 99 | 1875.1 | YES | 0.13 | 77.16 | YES | 1.773 | 332.552 | YES | 8.3 | 21.62 | YES | 60 | 7 71 | 0.0168 | 0.005229 | 3.31 | 0.00973 | 0.0789 | 89.68 | 11.21 | 37.35 |
| 96 | 99 | 1875.1 | YES | 0.13 | 77.16 | YES | 1.773 | 332.552 | YES | 8.3 | 21.62 | YES | 60 | 7 71 | 0.0168 | 0.005229 | 3.31 | 0.00973 | 0.0789 | 89.68 | 11.21 | 37.35 |
| 96 | 99 | 1875.1 | YES | 0.13 | 77.16 | YES | 1.773 | 332.552 | YES | 8.3 | 21.62 | YES | 60 | 7 71 | 0.0168 | 0.005229 | 3.31 | 0.00973 | 0.0789 | 89.68 | 11.21 | 37.35 |
| 96 | 99 | 1875.1 | YES | 0.13 | 77.16 | YES | 1.773 | 332.552 | YES | 8.3 | 21.62 | YES | 60 | 7 71 | 0.0168 | 0.005229 | 3.31 | 0.00973 | 0.0789 | 89.68 | 11.21 | 37.35 |
| 96 | 99 | 1875.1 | YES | 0.13 | 77.16 | YES | 1.773 | 332.552 | YES | 8.3 | 21.62 | YES | 60 | 7 71 | 0.0168 | 0.005229 | 3.31 | 0.00973 | 0.0789 | 89.68 | 11.21 | 37.35 |
| 96 | 99 | 1875.1 | YES | 0.13 | 77.16 | YES | 1.773 | 332.552 | YES | 8.3 | 21.62 | YES | 60 | 7 71 | 0.0168 | 0.005229 | 3.31 | 0.00973 | 0.0789 | 89.68 | 11.21 | 37.35 |
| 96 | 99 | 1875.1 | YES | 0.13 | 77.16 | YES | 1.773 | 332.552 | YES | 8.3 | 21.62 | YES | 60 | 7 71 | 0.0168 | 0.005229 | 3.31 | 0.00973 | 0.0789 | 89.68 | 11.21 | 37.35 |
| 96 | 99 | 1875.1 | YES | 0.13 | 77.16 | YES | 1.773 | 332.552 | YES | 8.3 | 21.62 | YES | 60 | 7 71 | 0.0168 | 0.005229 | 3.31 | 0.00973 | 0.0789 | 89.68 | 11.21 | 37.35 |
| 96 | 99 | 1875.1 | YES | 0.13 | 77.16 | YES | 1.773 | 332.552 | YES | 8.3 | 21.62 | YES | 60 | 7 71 | 0.0168 | 0.005229 | 3.31 | 0.00973 | 0.0789 | 89.68 | 11.21 | 37.35 |
| 96 | 99 | 1875.1 | YES | 0.13 | 77.16 | YES | 1.773 | 332.552 | YES | 8.3 | 21.62 | YES | 60 | 7 71 | 0.0168 | 0.005229 | 3.31 | 0. | | | | |

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| MAX | 2764.4 | mmBtu/hr | MAX Input | Heat Input combined Units 1 and 2 |
|--|----------|---------------------------|---------------|---|
| AVERAGE | 1836.1 | mmBtu/hr | AVERAGE Input | Heat input combined Units 1 and 2 (used or MIN LOAD scenario) |
| PEAK COMBINED UNIT (18 hours min load, 8 hours max load) | | | | |
| MAX | 29051.2 | mmBtu | | |
| MIN | 24957.78 | mmBtu | | |
| TOTAL | 51448.98 | mmBtu/ds | | |
| | | PROJECTED DAILY EMISSIONS | | |
| | FACTOR | UNITS | MAX (lb/day) | |
| NOx | 0.526 | lb/mmBtu | 11469.15 | |
| SO2 | 2.027 | lb/mmBtu | 44778.86 | |
| PM10 | 0.0168 | lb/mmBtu | 375.13 | |
| CO2 | 288.3 | tons/hr | 2266.40 | |
| acid | 0.062 | lb/hr | 0.39 | |
| mercury | 0.0001 | lb/mmBtu | 0.0008 | |
| HF | 0.0029 | lb/mmBtu | 1065.95 | |
| HF | 36.5024 | lb/hr | 132.02 | |
| CO | 55.0080 | lb/hr | 440.00 | |



PJM Interconnection, L.L.C.
2750 Monroe Boulevard
Audubon, PA 19403

Steven R. Pincus
Associate General Counsel
T: (610) 666-4438 | F: (610) 666-8211
steven.pincus@pjm.com

November 29, 2017

The Honorable James Richard Perry
Secretary of the Energy
United States Department of Energy
1000 Independence Ave, SW
Washington, DC 20585

Re: Order No. 202-17-4 Renewal Application Filing

Dear Secretary Perry:

Pursuant to Section 202(c) of the Federal Power Act (“FPA”),¹ Section 301(b) of the Department of Energy Organization Act,² the Department of Energy’s (“DOE”) Rules of Practice and Procedure³ and Order No. 202-17-4 issued on September 14, 2017 by the Secretary of Energy (“Secretary”) (the “September 14 Order”), PJM Interconnection, L.L.C. (“PJM”) respectfully submits a request for a 90-day renewal of the September 14 Order. PJM incorporates by reference PJM’s application submitted on June 13, 2017 (the “June 13 Application”) and all attachments and appendices thereto, and PJM’s August 24, 2017 renewal application (the “August 24 Application”) and all attachments and appendices thereto. PJM also incorporates by reference the various reports to DOE concerning the operations and emission data provided by PJM and Virginia Electric and Power Company (“Dominion Energy Virginia”) referenced below.

¹ 16 U.S.C. § 824a(c).

² 42 U.S.C. § § 7101 and 7151(b).

³ 16 C.F.R. §§ 205.370, 205.371 and 205.372 and 205.373.

Background

In the June 13 Application, PJM stated the need to request renewals of the Order No. 202-17-2 issued on June 16, 2017 (the “June 16 Order”) on a rolling basis until the PJM ordered Regional Transmission Expansion Planning Process (“RTEPP”) Skiffes Creek Transmission Project is placed into service, which was at that time anticipated to be completed in 18-20 months once all permits are issued.⁴ In the June 16 Order, the Secretary determined “that an emergency exists in the Commonwealth of Virginia due to a shortage of electric energy, a shortage of facilities for the generation of electric energy, and other causes, and that issuance of this Order will meet the emergency and serve the public interest.”⁵ In doing so, the Secretary directed Dominion Energy Virginia to operate Yorktown Units 1 and 2 as directed by PJM as needed to address reliability issues for the initial 90-day period, June 16, 2017 to September 14, 2017, or any renewal thereof.⁶ The Secretary also directed PJM and Dominion Energy Virginia to develop and implement a dispatch methodology and submit it to the DOE upon implementation.⁷ The dispatch methodology was submitted by PJM on June 27, 2017.

In the August 24 Application, PJM submitted a request for a 90 day renewal of the June 16 Order. PJM requested an order of the Secretary under Section 202 (c) of the FPA which provides among other things that an emergency continues to exist in the Commonwealth of Virginia due to a shortage of electric energy, a shortage of facilities for the generation of electric

⁴ On October 12, 2017, PJM and Dominion Energy Virginia submitted a report updating the outage schedule for the Skiffes Creek Transmission Project with an extension of the construction schedule of approximately five and one-half months from December 30, 2018 to May 12, 2019.

⁵ June 16 Order page 1.

⁶ June 16 Order page 2.

⁷ June 16 Order page 2.

energy, and other causes, and that issuance of a renewal order (*i.e.* the September 14 Order) will meet the emergency and serve the public interest for another 90 renewal period (*i.e.* from September 14, 2017 to December 13, 2017).

In the September 14 Order, the Secretary determined “that an emergency continues to exist in the North Hampton Roads area of Virginia due to a shortage of electric energy and a shortage of facilities for the generation and transmission of electric energy.”⁸ The Secretary granted PJM’s August 24 Application allowing operation of Yorktown Units 1 and 2, with certain modifications, for an additional 90-day period to expire on December 13, 2017.⁹ The Secretary’s directives required PJM and Dominion to “exhaust all reasonably and practically available resources, including demand response and behind-the-meter generation resources, prior to operating Yorktown Unit 1 and Yorktown Unit 2” consistent with “good utility practices” and in compliance with the dispatch methodology.¹⁰

⁸ September 14 Order page 1

⁹ September 14 Order page 1

¹⁰ September 14 Order page 2, paragraphs A and B. PJM has a detailed registration process as applied to demand response resources which are serving as capacity resources. PJM would utilize that information in applying this provision recognizing that: (i) the amount of registered demand response resources on the peninsula is limited; and (ii) during the renewal period covered by this application, certain demand response resources are available to PJM only in the summer period during the period. PJM has catalogued behind the meter resources based on data provided by the United States Energy Information Administration (“EIA”), Dominion and other sources. Although behind the meter resources are not subject to PJM’s direction, PJM works with Dominion to seek their assistance pursuant to the existing dispatch methodology. However, the DOE’s directive that PJM and Dominion Energy Virginia exhaust reasonably and practically available demand response and/or behind-the-meter resources applies only if exhausting such resources would lessen the need to operate the Yorktown Units 1 and/or 2 for reliability of the grid consistent with the dispatch methodology, PJM’s Governing Agreements and good utility practices. For example, if demand response and/or behind-the-meter resources would not provide needed reactive support, or otherwise not lessen the need to operate the Yorktown units for reliability, such resources would not be “reasonably and practically available” and operating the resources would not be consistent with the dispatch methodology, PJM’s Governing Agreements and good utility practices.

The September 14 Order directed PJM and Dominion Energy Virginia to report every two weeks during the term of the September 14 Order all dates on which Yorktown Units 1 and/or 2 are operated and associated air emissions and water usages for those dates.¹¹ The Secretary also directed reporting in the event the outage schedule or estimates changes from those presented in the August 24 Application. PJM and Dominion Energy Virginia submitted reports on September 28, 2017, August 22, 2017 and November 10, 2017, on the operation of Yorktown Units 1 and/or 2, and a report on October 12, 2017 revising the Skiffs Creek Transmission Project construction schedule and providing associated emission estimates.

The September 14 Order stated that “(i)f the conditions creating the emergency remain substantially unchanged, a renewal request should be submitted at least 14 calendar days before (the September 14 Order) expires.”¹² As conditions creating the emergency remain substantially unchanged, this renewal application is due on November 29, 2017.

Renewal Request

As stated in the June 13 Application as revised by the August 24 Application, the Skiffes Creek Transmission Project was expected to be completed and placed into service approximately 18-20 months after receipt of all applicable permits. With issuance of the U.S. Army Corps of Engineers’ (“Army Corps”) permit on July 3, 2017, Dominion Energy Virginia started construction of the Skiffes Creek project on July 10, 2017. As reported on October 12, 2017, the Skiffs Creek Transmission Project is scheduled to be completed May 12, 2019. Thus, given the continued extended nature of the emergency, PJM respectfully submits that the emergency as set

¹¹ September 14 Order page 2, paragraph C.

¹² September 14 Order page 2, paragraph D.

forth in the June 13 Application and August 24 Application and as determined by the Secretary in the June 16 Order and September 14 continues to exist.

Therefore, PJM respectfully requests that the Secretary grant this renewal application and order the continued operation of Yorktown Units 1 and 2 to alleviate the emergency described in the June 13 Application, the August 24 Application and hereinabove prior to the expiration of the current order (*i.e.* December 13, 2017) under Section 202 (c) of the FPA. PJM request the requested renewal order provide as follows:

- (i) that an emergency continues to exist in the North Hampton Roads area of Virginia due to a shortage of electric energy and a shortage of facilities for the generation and transmission of electric energy and that issuance of a renewal Order will meet the emergency and serve the public interest;
- (ii) from December 13, 2017 to March 13, 2018, Dominion Energy Virginia is directed to operate Yorktown Units 1 and 2 as directed by PJM as needed to maintain grid reliability or for other local area transmission issues;
- (iii) the limitations on operations ensure, to the maximum extent practicable, consistency with applicable laws and regulations, and the reporting requirements for operations and estimated emissions ensure transparency of implementation;
- (iv) consistent with the dispatch methodology submitted by PJM on June 27, 2017, good utility practice and the PJM Tariff, PJM and Dominion Energy Virginia shall exhaust all reasonably and practically available resources including demand response and identified behind-the-meter generation resources to the extent that

such resources address maintenance of grid reliability, prior to operating Yorktown Units 1 and/or 2;¹³

- (v) Dominion Energy Virginia shall continue to follow the dispatch methodology submitted by PJM on June 27, 2017;
- (vi) PJM and Dominion Energy Virginia shall report all dates on which Yorktown Units 1 and/or 2 are operated as well as the estimated emissions and water usage date for those dates within ten (10) business days of such operation; and
- (vii) in the event that the outage schedule or estimates change from those presented in this renewal application, within ten (10) business days PJM and Dominion Energy Virginia shall also provide updated outages schedules and associated Yorktown Units 1 and 2 emission estimates.

Respectfully submitted,



Steven R. Pincus
Associate General Counsel
PJM Interconnection, L.L.C.

Craig Glazer
VP, Federal Government Policy
PJM Interconnection, L.L.C.

Cc (via electronic mail): Pat Hoffman, U.S. Department of Energy
Catherine Jereza, U.S. Department of Energy
Rakesh Batra, U.S. Department of Energy
Michael C. Regulinski, Dominion Energy Services, Inc.
Casey Roberts, Sierra Club Environmental Law Program

¹³ See Footnote 10.

Rodriguez, Susan (CONTR)

From: Jereza, Catherine
Sent: Monday, January 08, 2018 6:32 AM
To: Batra, Rakesh
Subject: RE: 202c

Thank you!

-----Original Message-----

From: Batra, Rakesh
Sent: Monday, January 08, 2018 9:30 AM
To: Smith, Wayne D <Wayne.Smith@hq.doe.gov>; Jereza, Catherine <Catherine.Jereza@Hq.Doe.Gov>; Bowie, America <America.Bowie@hq.doe.gov>
Cc: Mills, Brian <Brian.Mills@hq.doe.gov>; Rosenbaum, Matthew <Matthew.Rosenbaum@hq.doe.gov>; Lawrence, Christopher <Christopher.Lawrence@hq.doe.gov>
Subject: RE: 202c

We received 202 (c) applications from two applicants, PJM/Dominion and GRDA in 2017.
Attached are the PJM/Dominion Original and two renewal applications and GRDA application.

Please let me know if I could be of further assistance.

Thanks,
Rakesh

-----Original Message-----

From: Jereza, Catherine
Sent: Friday, January 05, 2018 5:52 PM
To: Batra, Rakesh <Rakesh.Batra@Hq.Doe.Gov>; Mills, Brian <Brian.Mills@hq.doe.gov>; Rosenbaum, Matthew <Matthew.Rosenbaum@hq.doe.gov>; Lawrence, Christopher <Christopher.Lawrence@hq.doe.gov>
Subject: FW: 202c

Brian McCormack requested the applications for all 202c orders in the past year. I had trouble finding them on the O Drive, but I at least had the first one from PJM.

Is the regulations I found on the O drive the correct version?

Can we have all the applications ready to go Monday morning?

Thanks!
Katie

-----Original Message-----

From: Jereza, Catherine
Sent: Friday, January 05, 2018 5:38 PM
To: Smith, Wayne D <Wayne.Smith@hq.doe.gov>; Bowie, America <America.Bowie@hq.doe.gov>
Subject: 202c

Hi Wayne and America,

Attached is the DOE implementing regulations document, which provides the information required for requesting an order from the Secretary. Right after we talked I found the email with the application and relevant attachments from PJM for the ongoing 202c emergency order that began back in June. So we have the real thing for the most recent order!

In the mean time I will ask Rakesh Batrah and my staff to provide the applications for the previous orders.

Have a great weekend!
Katie

Catherine Jereza
Deputy Assistant Secretary, Transmission Permitting & Technical Assistance
Office of Electricity Delivery & Energy Reliability
U.S. Department of Energy
(o) 202.586.0334
(c) (b) (6)

Shamika Lawrence
Shamika.Lawrence@hq.doe.gov
202.586.4666

** Please contact Shamika for all meeting and scheduling requests. **

Rodriguez, Susan (CONTR)

From: Smith, Wayne D
Sent: Monday, January 08, 2018 8:10 AM
To: Batra, Rakesh; Jereza, Catherine; Bowie, America
Cc: Mills, Brian; Rosenbaum, Matthew; Lawrence, Christopher
Subject: RE: 202c

Importance: High

Any updates. (b) (5)

I'm happy to print them out.

From: Batra, Rakesh <Rakesh.Batra@Hq.Doe.Gov>
Date: Monday, Jan 08, 2018, 9:56 AM
To: Smith, Wayne D <Wayne.Smith@hq.doe.gov>; Jereza, Catherine <Catherine.Jereza@Hq.Doe.Gov>; Bowie, America <America.Bowie@hq.doe.gov>
Cc: Mills, Brian <Brian.Mills@hq.doe.gov>; Rosenbaum, Matthew <Matthew.Rosenbaum@hq.doe.gov>; Lawrence, Christopher <Christopher.Lawrence@hq.doe.gov>
Subject: RE: 202c

Below is the link we discussed.

<https://energy.gov/oe/services/electricity-policy-coordination-and-implementation/other-regulatory-efforts/does-use>

Thanks,

Rakesh

-----Original Message-----

From: Smith, Wayne D
Sent: Monday, January 08, 2018 9:54 AM
To: Batra, Rakesh <Rakesh.Batra@Hq.Doe.Gov>; Jereza, Catherine <Catherine.Jereza@Hq.Doe.Gov>; Bowie, America <America.Bowie@hq.doe.gov>
Cc: Mills, Brian <Brian.Mills@hq.doe.gov>; Rosenbaum, Matthew <Matthew.Rosenbaum@hq.doe.gov>; Lawrence, Christopher <Christopher.Lawrence@hq.doe.gov>
Subject: RE: 202c

Thank you.

Wayne D. Smith | Director
 Office of the Executive Secretariat
 U.S. Department of Energy | wayne.smith@hq.doe.gov
 (202) 586-6207 | (b) (6) (mobile)

-----Original Message-----

From: Batra, Rakesh
Sent: Monday, January 08, 2018 9:30 AM
To: Smith, Wayne D <Wayne.Smith@hq.doe.gov>; Jereza, Catherine <Catherine.Jereza@Hq.Doe.Gov>; Bowie, America

<America.Bowie@hq.doe.gov>

Cc: Mills, Brian <Brian.Mills@hq.doe.gov>; Rosenbaum, Matthew <Matthew.Rosenbaum@hq.doe.gov>; Lawrence, Christopher <Christopher.Lawrence@hq.doe.gov>
Subject: RE: 202c

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Sent: Friday, January 05, 2018 5:38 PM
To: Smith, Wayne D <Wayne.Smith@hq.doe.gov>; Bowie, America <America.Bowie@hq.doe.gov>
Subject: 202c

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Have a great weekend!
Katie

Catherine Jereza
Deputy Assistant Secretary, Transmission Permitting & Technical Assistance
Office of Electricity Delivery & Energy Reliability
U.S. Department of Energy
(o) 202.586.0334
(c) (b) (6)

Shamika Lawrence
Shamika.Lawrence@hq.doe.gov

202.586.4666

** Please contact Shamika for all meeting and scheduling requests. **

Rodriguez, Susan (CONTR)

From: Jereza, Catherine
Sent: Monday, January 08, 2018 9:58 AM
To: Batra, Rakesh; Rosenbaum, Matthew
Subject: RE: 202(c) files - California energy crisis

Thanks!

From: Batra, Rakesh
Sent: Monday, January 08, 2018 12:44 PM
To: Rosenbaum, Matthew <Matthew.Rosenbaum@hq.doe.gov>; Jereza, Catherine <Catherine.Jereza@Hq.Doe.Gov>
Subject: RE: 202(c) files - California energy crisis

<https://www.eia.gov/electricity/policies/legislation/california/subsequentevents.html>

The web site lists several actions taken by CA and Federal Government to Contain the Energy Crisis.:

The following actions were taken by DOE to help mitigate the energy crisis and to put into place permanent solutions to the problems California has been experiencing since the summer of 2000:

December 14, 2000: The Secretary of Energy initiated an order requiring certain generators and power marketers to supply electricity to California's power system operator in order to help avert power outages. The Order was extended every week until Feb 7, 2001.

-----Original Message-----

From: Rosenbaum, Matthew
Sent: Monday, January 08, 2018 11:53 AM
To: Jereza, Catherine <Catherine.Jereza@Hq.Doe.Gov>
Cc: Batra, Rakesh <Rakesh.Batra@Hq.Doe.Gov>
Subject: FW: 202(c) files

Here is a major addition to what we submit.

Matt

-----Original Message-----

From: Drake, Christopher
Sent: Monday, January 08, 2018 11:42 AM
To: Batra, Rakesh <Rakesh.Batra@Hq.Doe.Gov>; Rosenbaum, Matthew <Matthew.Rosenbaum@hq.doe.gov>
Cc: Konieczny, Katherine <Katherine.Konieczny@Hq.Doe.Gov>
Subject: RE: 202(c) files

Rakesh & Matt,

I have attached a .zip file with all pre-2000 202(c) orders. They are all FPC orders — DOE did not invoke its authority under 202(c), which it obtained via section 301(b) of the DOE Organization Act in 1977, until December 2000.

Unfortunately, we do not have a chart of all these orders, but they are all in the attached .zip file, with citations to the FPC reporter.

Chris Drake
Attorney-Adviser
U.S. Department of Energy, Office of General Counsel
Office of Electricity & Fossil Energy (GC-76)
Forrestal North, Room 6B-256
Tel. 202.586.2919
Christopher.Drake@hq.doe.gov

This communication may contain privileged or confidential material. Potential privileges include, but are not limited to, Attorney-Client, Attorney Work-Product, and Deliberative Process.

Rodriguez, Susan (CONTR)

From: Lawrence, Shamika
Sent: Tuesday, January 16, 2018 5:38 AM
To: Jereza, Catherine
Subject: RE: Timeline for the next PJM/Dominion 202 (c) filing

I will reach out to Rakesh to set something up for this week.

Shamika Lawrence
ICF, Contractor to the US Department of Energy
Office of Electricity Delivery & Energy Reliability
1000 Independence Avenue S.W. | Suite 6E-092 | Washington, DC 20585
Office: 202-586-4666
DOE Email: shamika.lawrence@hq.doe.gov

-----Original Message-----

From: Jereza, Catherine
Sent: Friday, January 12, 2018 11:59 AM
To: Batra, Rakesh <Rakesh.Batra@Hq.Doe.Gov>; Rosenbaum, Matthew <Matthew.Rosenbaum@hq.doe.gov>; Mills, Brian <Brian.Mills@hq.doe.gov>
Cc: Lawrence, Shamika <Shamika.Lawrence@hq.doe.gov>
Subject: RE: Timeline for the next PJM/Dominion 202 (c) filing

I have several comments, some I thought we discussed previously. Let's talk next week. Can you make the edits before we meet?

Shamika can you schedule?

Thanks
Katie

-----Original Message-----

From: Batra, Rakesh
Sent: Thursday, December 28, 2017 3:16 PM
To: Jereza, Catherine <Catherine.Jereza@Hq.Doe.Gov>; Rosenbaum, Matthew <Matthew.Rosenbaum@hq.doe.gov>; Mills, Brian <Brian.Mills@hq.doe.gov>
Subject: Timeline for the next PJM/Dominion 202 (c) filing

Katie:

Please find attached, timeline for the next PJM/Dominion 202 (c) filing. After incorporating your comments, Matt, Brian and I reviewed it.

Please let me know if I missed anything or you have any further comments.

Thanks,
Rakesh Batra
202-586-1283

Rodriguez, Susan (CONTR)

From: Bittner, Kathy (CONTR)
Sent: Tuesday, January 23, 2018 7:42 AM
To: Batra, Rakesh
Cc: Jereza, Catherine
Subject: RE: new Section 202c applications

Thank you.

From: Batra, Rakesh
Sent: Tuesday, January 23, 2018 10:17 AM
To: Bittner, Kathy (CONTR) <Kathy.Bittner@hq.doe.gov>
Cc: Jereza, Catherine <Catherine.Jereza@Hq.Doe.Gov>
Subject: RE: new Section 202c applications

Kathy,
As of yesterday, I have not received any 202(c) application.

Rakesh

From: Bittner, Kathy (CONTR) <Kathy.Bittner@hq.doe.gov>
Date: Tuesday, Jan 23, 2018, 10:02 AM
To: Batra, Rakesh <Rakesh.Batra@Hq.Doe.Gov>
Cc: Jereza, Catherine <Catherine.Jereza@Hq.Doe.Gov>
Subject: new Section 202c applications

Good morning Rakesh,

I received a phone call from Exec Sec asking if OE has a new Section 202c application.

Would you please let me know if OE has received any?

Thanks,
Kathy Bittner
Correspondence Specialist
ICF, Contractor for U.S. Department of Energy
Office of Electricity Delivery and Energy Reliability
Phone: (202) 287-5613
Email: kathy.bittner@hq.doe.gov

Rodriguez, Susan (CONTR)

From: Fisher, Travis
Sent: Friday, February 02, 2018 2:11 PM
To: Turner, Alexa
Subject: RE: Pacific Gas and Electric

Perfect. I'll be around... Ext. 6-1117

Have a great weekend!

-----Original Message-----

From: Turner, Alexa
Sent: Friday, February 02, 2018 5:09 PM
To: Fisher, Travis <Travis.Fisher@hq.doe.gov>
Subject: RE: Pacific Gas and Electric

Interesting...let's chat on Monday.

Alexa Turner
Special Advisor
Office of the Deputy Secretary

-----Original Message-----

From: Fisher, Travis
Sent: Friday, February 02, 2018 5:05 PM
To: Turner, Alexa <Alexa.Turner@hq.doe.gov>
Subject: RE: Pacific Gas and Electric

No worries at all. (b) (6)

-----Original Message-----

From: Turner, Alexa
Sent: Thursday, February 01, 2018 6:04 PM
To: Fisher, Travis <Travis.Fisher@hq.doe.gov>
Subject: RE: Pacific Gas and Electric

Hey, thanks for your help on this one.

Alexa Turner
Special Advisor
Office of the Deputy Secretary

-----Original Message-----

From: Fisher, Travis
Sent: Monday, January 29, 2018 3:16 PM
To: Turner, Alexa <Alexa.Turner@hq.doe.gov>

Cc: Singer, Emily <Emily.Singer@hq.doe.gov>; Walker, Bruce <Bruce.Walker@hq.doe.gov>
Subject: RE: Pacific Gas and Electric

Gotcha. I wasn't in the loop on this, but it looks like PG&E is catching some of the blame for the fires:
<https://www.nbcbayarea.com/news/local/PGE-Wildfire-Response-Questioned-467972693.html>

And last week, PG&E decided to change its policy on reclosers: <https://www.nbcbayarea.com/news/local/PGE-Makes-Apparent-Policy-Change-for-Fire-Season-471396853.html>

I'm copying Bruce in case he has anything to add from the utility perspective.

-----Original Message-----

From: Turner, Alexa
Sent: Monday, January 29, 2018 3:07 PM
To: Fisher, Travis <Travis.Fisher@hq.doe.gov>
Cc: Singer, Emily <Emily.Singer@hq.doe.gov>
Subject: RE: Pacific Gas and Electric

So we just heard back from them and they're indicating that the topic will be the CA wildfires.

Alexa Turner
Special Advisor
Office of the Deputy Secretary

-----Original Message-----

From: Fisher, Travis
Sent: Monday, January 29, 2018 1:26 PM
To: Turner, Alexa <Alexa.Turner@hq.doe.gov>
Cc: Singer, Emily <Emily.Singer@hq.doe.gov>
Subject: RE: Pacific Gas and Electric

I did a quick search to see what the latest news was on Diablo Canyon, but I found something even more interesting:
<https://www.greentechmedia.com/articles/read/pge-must-solicit-energy-storage-ders-to-replace-three-existing-gas-plants#gs.CTx3EtU> (b) (5)

Here's an op-ed from a Heritage energy expert on Diablo Canyon. (b) (5)
<https://www.sgvtribune.com/2018/01/25/diablo-canyon-shutdown-last-chapter-for-clean-nuclear-power-in-california/>

Is this the kind of stuff you were looking for?

-----Original Message-----

From: Turner, Alexa
Sent: Monday, January 29, 2018 1:14 PM
To: Fisher, Travis <Travis.Fisher@hq.doe.gov>
Cc: Singer, Emily <Emily.Singer@hq.doe.gov>
Subject: Pacific Gas and Electric

Travis-

As a heads up, S2 is meeting with PG&E tomorrow (Jeff Miller, CFO, SVP of Strategy & Policy, and Manager of Federal Affairs attending). We're trying to get in touch with them right now about topic/background material but haven't heard back. Do you think OE would have anything to flag for this meeting? If not, we'll just pull together some quick overview facts.

Thanks!

Alexa

Rodriguez, Susan (CONTR)

From: Jereza, Catherine
Sent: Friday, February 09, 2018 8:40 AM
To: Konieczny, Katherine; Fibbe, George
Subject: RE: 202c story

What Kathy says is true.

From: Konieczny, Katherine
Sent: Friday, February 09, 2018 11:29 AM
To: Fibbe, George <George.Fibbe@hq.doe.gov>; Jereza, Catherine <Catherine.Jereza@Hq.Doe.Gov>
Subject: RE: 202c story

PRIVILEGED – ATTORNEY-CLIENT – ATTORNEY WORK-PRODUCT

(b) (5)

I've copied Katie to confirm the facts above.
Thanks,
Kathy

From: Fibbe, George
Sent: Friday, February 09, 2018 10:59 AM
To: Konieczny, Katherine <Katherine.Konieczny@Hq.Doe.Gov>
Subject: FW: 202c story

From: Hynes, Shaylyn <Shaylyn.Hynes@hq.doe.gov>
Date: Friday, Feb 09, 2018, 10:41 AM
To: Fibbe, George <George.Fibbe@hq.doe.gov>; Brown, Michael <Michael.Brown@hq.doe.gov>
Subject: RE: 202c story

Thanks! Time sensitive so asap.

From: Fibbe, George
Sent: Friday, February 09, 2018 10:41 AM

To: Hynes, Shaylyn <Shaylyn.Hynes@hq.doe.gov>; Brown, Michael <Michael.Brown@hq.doe.gov>
Subject: RE: 202c story

I will check with Kathy Konieczny in Bernie's group.

From: Hynes, Shaylyn <Shaylyn.Hynes@hq.doe.gov>
Date: Friday, Feb 09, 2018, 10:39 AM
To: Fibbe, George <George.Fibbe@hq.doe.gov>, Brown, Michael <Michael.Brown@hq.doe.gov>
Subject: FW: 202c story

Has anything come through GC?

From: Varnasidis, Sophia
Sent: Friday, February 09, 2018 10:35 AM
To: McCormack, Brian <Brian.Mccormack@hq.doe.gov>; Hynes, Shaylyn <Shaylyn.Hynes@hq.doe.gov>
Cc: Menezes, Mark <Mark.Menezes@hq.doe.gov>; Colgary, James <James.Colgary@hq.doe.gov>
Subject: RE: 202c story

Shaylyn is going to check with OE and GC. (b) (5)

From: McCormack, Brian
Sent: Friday, February 09, 2018 10:31 AM
To: Varnasidis, Sophia <Sophia.Varnasidis@hq.doe.gov>; Hynes, Shaylyn <Shaylyn.Hynes@hq.doe.gov>
Cc: Menezes, Mark <Mark.Menezes@hq.doe.gov>; Colgary, James <James.Colgary@hq.doe.gov>
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Sent: Friday, February 09, 2018 10:29 AM
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Cc: Menezes, Mark <Mark.Menezes@hq.doe.gov>; McCormack, Brian <Brian.Mccormack@hq.doe.gov>; Colgary, James <James.Colgary@hq.doe.gov>
Subject: RE: 202c story

(b) (5)

From: Colgary, James
Sent: Friday, February 09, 2018 10:05 AM
To: Hynes, Shaylyn <Shaylyn.Hynes@hq.doe.gov>; Menezes, Mark <Mark.Menezes@hq.doe.gov>; McCormack, Brian <Brian.Mccormack@hq.doe.gov>; Varnasidis, Sophia <Sophia.Varnasidis@hq.doe.gov>
Subject: RE: 202c story

(b) (5)

Jim Colgary
Chief of Staff to the
Deputy Secretary
Department of Energy
202-586-5500

From: Hynes, Shaylyn
Sent: Friday, February 09, 2018 9:48 AM
To: Menezes, Mark <Mark.Menezes@hq.doe.gov>; McCormack, Brian <Brian.Mccormack@hq.doe.gov>; Colgary, James <James.Colgary@hq.doe.gov>; Varnasidis, Sophia <Sophia.Varnasidis@hq.doe.gov>
Subject: RE: 202c story

Just spoke to Darius on this and he followed up asking for a unique quote. Are you all ok with this?

(b) (5)

From: Darius Dixon [<mailto:ddixon@politico.com>]
Sent: Friday, February 09, 2018 9:38 AM
To: Hynes, Shaylyn <Shaylyn.Hynes@hq.doe.gov>
Subject: Re: 202c story

Not to belabor this but is there any way I could have a line on the record about how currently there are no applications, and that DOE would not proceed without an application?

--
Darius Dixon
Energy reporter
POLITICO
(b) (6) (m)

Rodriguez, Susan (CONTR)

From: Jereza, Catherine
Sent: Friday, February 09, 2018 8:42 AM
To: Harbin, Christine
Subject: FW: 202c story

FYI: All true.

From: Konieczny, Katherine
Sent: Friday, February 09, 2018 11:29 AM
To: Fibbe, George <George.Fibbe@hq.doe.gov>; Jereza, Catherine <Catherine.Jereza@Hq.Doe.Gov>
Subject: RE: 202c story

PRIVILEGED – ATTORNEY-CLIENT – ATTORNEY WORK-PRODUCT

(b) (5)

I've copied Katie to confirm the facts above.
Thanks,
Kathy

From: Fibbe, George
Sent: Friday, February 09, 2018 10:59 AM
To: Konieczny, Katherine <Katherine.Konieczny@Hq.Doe.Gov>
Subject: FW: 202c story

From: Hynes, Shaylyn <Shaylyn.Hynes@hq.doe.gov>
Date: Friday, Feb 09, 2018, 10:41 AM
To: Fibbe, George <George.Fibbe@hq.doe.gov>, Brown, Michael <Michael.Brown@hq.doe.gov>
Subject: RE: 202c story

Thanks! Time sensitive so asap.

From: Fibbe, George
Sent: Friday, February 09, 2018 10:41 AM

To: Hynes, Shaylyn <Shaylyn.Hynes@hq.doe.gov>; Brown, Michael <Michael.Brown@hq.doe.gov>
Subject: RE: 202c story

I will check with Kathy Konieczny in Bernie's group.

From: Hynes, Shaylyn <Shaylyn.Hynes@hq.doe.gov>
Date: Friday, Feb 09, 2018, 10:39 AM
To: Fibbe, George <George.Fibbe@hq.doe.gov>, Brown, Michael <Michael.Brown@hq.doe.gov>
Subject: FW: 202c story

Has anything come through GC?

From: Varnasidis, Sophia
Sent: Friday, February 09, 2018 10:35 AM
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Jim Colgary
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Deputy Secretary
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Subject: Re: 202c story

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—
Darius Dixon
Energy reporter
POLITICO
(b) (6) (m)

Rodriguez, Susan (CONTR)

From: Stanek, Jason <Jason.Stanek@mail.house.gov>
Sent: Thursday, February 15, 2018 1:43 PM
To: Fisher, Travis
Subject: FPA 202(c) - emergency authority

Hey -- I was taking a look at this section and the authority seems to rest with FERC, not DOE.

How is it that DOE can use this authority when the FPA gives this authority only to FERC? Did something change along the way?

Thanks,
J.

PS: Having a call with the Bennett staff tomorrow.

Rodriguez, Susan (CONTR)

From: Batra, Rakesh
Sent: Tuesday, February 20, 2018 1:27 PM
To: Pitcher, Lisa
Cc: Mills, Brian; Jereza, Catherine; Rosenbaum, Matthew; Drake, Christopher; Bittner, Kathy (CONTR)
Subject: FW: Order No. 202-18-2, PJM Interconnection, L.L.C. Renewal Application Filing
Attachments: DOE Order 202-18-2 Renewal Application 2-20-18 Filing Letter Final.pdf

FYI. We received the attached PJM/Dominion 202(c) filing.

Thanks
 Rakesh

From: Pincus, Steven <Steven.Pincus@pjm.com>
Date: Tuesday, Feb 20, 2018, 2:19 PM
To: Secretary Perry <The.Secretary@hq.doe.gov>, Hoffman, Patricia <Pat.Hoffman@hq.doe.gov>, Jereza, Catherine <Catherine.Jereza@Hq.Doe.Gov>, Batra, Rakesh <Rakesh.Batra@Hq.Doe.Gov>, Konieczny, Katherine <Katherine.Konieczny@Hq.Doe.Gov>
Cc: Michael Regulinski (Services - 6) <michael.regulinski@dominionenergy.com>, Bryson, Mike E. <Michael.Bryson@pjm.com>, Souder, David W. <David.Souder@pjm.com>, Tam, Simon K. <Simon.Tam@pjm.com>, Glazer, Craig <Craig.Glazer@pjm.com>, O'Hara, Chris <Chris.OHara@pjm.com>, casey.roberts@sierraclub.org <casey.roberts@sierraclub.org>, Robinson, Evelyn <Evelyn.Robinson@pjm.com>
Subject: Order No. 202-18-2, PJM Interconnection, L.L.C., Renewal Application Filing

Dear Secretary Perry:

PJM respectfully submits for filing a ninety (90) day Renewal Application in accordance with Section 202(c) of the Federal Power Act, the Department of Energy's Rules of Practice and Procedure and Order No. 202-18-24.

Please contact me if you have any questions.

Thank you for your consideration.

Respectfully,

Steven R. Pincus
 Associate General Counsel, Office of General Counsel

(610) 666-4370 | C: (b) (6) | Steven.Pincus@pjm.com
 PJM Interconnection | 2750 Monroe Blvd. | Audubon, PA 19403

This e-mail message and any attached files are confidential and are solely for the use of the intended recipient.



PJM Interconnection, L.L.C.
2750 Monroe Boulevard
Audubon, PA 19403

Steven R. Pincus
Associate General Counsel
T: (610) 666-4438 | F: (610) 666-8211
steven.pincus@pjm.com

February 20, 2018

The Honorable James Richard Perry
Secretary of the Energy
United States Department of Energy
1000 Independence Ave, SW
Washington, DC 20585

Re: Order No. 202-18-2 Renewal Application Filing

Dear Secretary Perry:

Pursuant to Section 202(c) of the Federal Power Act (“FPA”),¹ Section 301(b) of the Department of Energy Organization Act,² the Department of Energy’s (“DOE”) Rules of Practice and Procedure³ and Order No. 202-18-2 issued on December 13, 2018 by the Secretary of Energy (“Secretary”) (the “December 13 Order”), PJM Interconnection, L.L.C. (“PJM”) respectfully submits a request for a 90-day renewal of the December 13 Order. PJM incorporates by reference PJM’s initial application submitted on June 13, 2017, and all attachments and appendices thereto (the “June 13 Application”). PJM also incorporates by reference (i) PJM’s renewal applications submitted on November 29, 2017 (the “November 29 Application”), June 13, 2017 (the “June 13 Application”) and August 24, 2017 (the “August24 Application”) and all attachments and appendices thereto (collectively, “Renewal Applications”); and (ii) the various reports to DOE concerning the operations and emission data provided by PJM and Virginia Electric and Power Company (“Dominion Energy Virginia”) referenced below.

¹ 16 U.S.C. § 824a(c).

² 42 U.S.C. § § 7101 and 7151(b).

³ 16 C.F.R. §§ 205.370, 205.371 and 205.372 and 205.373.

I. BACKGROUND

A. The June 13 Application

In the Renewal Applications, PJM stated the need to request renewals of the Order No. 202-17-2 issued on June 16, 2017 (the “June 16 Order”) on a rolling basis until the PJM ordered Regional Transmission Expansion Planning Process (“RTEPP”) Skiffes Creek Transmission Project is placed into service, which was originally anticipated to be completed in 18-20 months once all permits are issued.⁴ In the June 16 Order, the Secretary determined “that an emergency exists in the Commonwealth of Virginia due to a shortage of electric energy, a shortage of facilities for the generation of electric energy, and other causes, and that issuance of this Order will meet the emergency and serve the public interest.”⁵ In doing so, the Secretary directed Dominion Energy Virginia to operate Yorktown Units 1 and 2 as directed by PJM as needed to address reliability issues for the initial 90-day period, June 16, 2017 to September 14, 2017, or any renewal thereof.⁶ The Secretary also directed PJM and Dominion Energy Virginia to develop and implement a dispatch methodology and submit it to the DOE upon implementation.⁷ The dispatch methodology was submitted by PJM on June 27, 2017.

B. The August 24 Application for Renewal of the June 16 Order.

In the August 24 Application, PJM submitted a request for a 90 day renewal of the June 16 Order. PJM requested an order of the Secretary under Section 202 (c) of the FPA which

⁴ On October 12, 2017, PJM and Dominion Energy Virginia submitted a report updating the outage schedule for the Skiffes Creek Transmission Project with an extension of the construction schedule of approximately five and one-half months from December 30, 2018 to May 12, 2019

⁵ June 16 Order, page 1.

⁶ June 16 Order, page 2.

⁷ June 16 Order, page 2.

provides among other things that an emergency continues to exist in the Commonwealth of Virginia due to a shortage of electric energy, a shortage of facilities for the generation of electric energy, and other causes, and that issuance of a renewal order will meet the emergency and serve the public interest for another 90 renewal period (i.e. from September 14, 2017 to December 13, 2017). As a result, the Secretary issued Order No. 202-17-4 (the “September 14 Order”).

In the September 14 Order, the Secretary determined “that an emergency continues to exist in the North Hampton Roads area of Virginia due to a shortage of electric energy and a shortage of facilities for the generation and transmission of electric energy.”⁸ The Secretary granted PJM’s August 24 Application allowing operation of Yorktown Units 1 and 2, with certain modifications, for an additional 90-day period to expire on December 13, 2017.⁹ The Secretary’s directives required PJM and Dominion to “exhaust all reasonably and practically available resources, including demand response and behind-the-meter generation resources, prior to operating Yorktown Unit 1 and Yorktown Unit 2” consistent with “good utility practices” and in compliance with the dispatch methodology.¹⁰

⁸ September 14 Order page 1

⁹ September 14 Order page 1

¹⁰ September 14 Order, page 2, paragraphs A and B. PJM has a detailed registration process as applied to demand response resources which are serving as capacity resources. PJM would utilize that information in applying this provision recognizing that: (i) the amount of registered demand response resources on the peninsula is limited; and (ii) during the renewal period covered by this application, certain demand response resources are available to PJM only in the summer period during the period. PJM has catalogued behind the meter resources based on data provided by the United States Energy Information Administration (“EIA”), Dominion and other sources. Although behind the meter resources are not subject to PJM’s direction, PJM works with Dominion to seek their assistance pursuant to the existing dispatch methodology. However, the DOE’s directive that PJM and Dominion Energy Virginia exhaust reasonably and practically available demand response and/or behind-the-meter resources applies only if exhausting such resources would lessen the need to operate the Yorktown Units 1 and/or 2 for reliability of the grid consistent with the dispatch methodology, PJM’s Governing Agreements and good utility practices. For example, if demand response and/or behind-the-meter resources would not provide needed reactive support, or otherwise not lessen the need to operate the Yorktown units for reliability, such resources would not be “reasonably

The September 14 Order directed PJM and Dominion Energy Virginia to report every two weeks during the term of the September 14 Order all dates on which Yorktown Units 1 and/or 2 are operated and associated air emissions and water usages for those dates.¹¹ The Secretary also directed reporting in the event the outage schedule or estimates changes from those presented in the August 24 Application. PJM and Dominion Energy Virginia submitted reports on September 28, 2017, August 22, 2017 and November 10, 2017, on the operation of Yorktown Units 1 and/or 2, and a report on October 12, 2017 revising the Skiffs Creek Transmission Project construction schedule and providing associated emission estimates.

The September 14 Order stated that “(i)f the conditions creating the emergency remain substantially unchanged, a renewal request should be submitted at least 14 calendar days before (the September 14 Order) expires.”¹² As conditions creating the emergency remain substantially unchanged, the renewal application was due on November 29, 2017.

C. The November 29 Application for Renewal of the September 14 Order.

As conditions creating the emergency remained substantially unchanged from the date of the issuance of the September 14 Order, PJM submitted a 90 day renewal application (*i.e.*, the November 29 application). In the November 29 Application, PJM requested an order of the Secretary under Section 202 (c) of the FPA which provides among other things that an emergency continues to exist in the Commonwealth of Virginia due to a shortage of electric

and practically available” and operating the resources would not be consistent with the dispatch methodology, PJM’s Governing Agreements and good utility practices.

¹¹ September 14 Order page 2, paragraph C.

¹² September 14 Order page 2, paragraph D.

energy, a shortage of facilities for the generation of electric energy, and other causes, and that issuance of a renewal order will meet the emergency and serve the public interest for another 90 renewal period (*i.e.*, from December 14, 2017 to March 13, 2018). As a result, the Secretary issued the December 13 Order.

In the December 13 Order, the Secretary determined “that an emergency continues to exist in the North Hampton Roads area of Virginia due to a shortage of electric energy and a shortage of facilities for the generation and transmission of electric energy.”¹³ The Secretary granted PJM’s November 29 Application allowing operation of Yorktown Units 1 and 2, with certain modifications, for an additional 90-day period to expire on March 13, 2017.¹⁴ The Secretary’s directives require PJM and Dominion to “exhaust all reasonably and practically available resources, including demand response and behind-the-meter generation resources, prior to operating Yorktown Unit 1 and Yorktown Unit 2” consistent with “good utility practices” and in compliance with the dispatch methodology.¹⁵

¹³ December 13 Order, page 1.

¹⁴ December 13 Order, page 1.

¹⁵ December 13 Order, page 2, paragraphs A and B. In the Summary of Findings of Department of Energy Order No. 202-18-2, the Secretary concurred with PJM’s interpretation of the implementing paragraphs A and B of the September 14 Order as follows: *In the November 29 Renewal Application, PJM sought to clarify how it is implementing ordering paragraphs A and B of Order No. 202-17-4, which require that (1) “Consistent with good utility practice, PJM and Dominion shall exhaust all reasonably and practically available resources, including demand response and behind-the-meter generation resources, prior to operating Yorktown Unit 1 or Yorktown Unit 2,” and (2) “Dominion shall continue to comply with the dispatch methodology submitted by PJM on June 27, 2017.” PJM explained that “if demand response and/or behind-the-meter resources would not provide needed reactive support, or otherwise not lessen the need to operate the Yorktown units for reliability, such resources would not be ‘reasonably and practically available’ and operating the resources would not be consistent with the [terms of Order No. 202-17-4].” Renewal Application at 3 n.10. DOE concurs with this interpretation, and adjustments have been made to the ordering paragraphs of Order No. 202-18-2 to reflect that view.* December 12 Order page 2.

The December 13 Order directed PJM and Dominion Energy Virginia to report every two weeks during the term of the December 13 Order all dates on which Yorktown Units 1 and/or 2 are operated and associated air emissions and water usages for those dates.¹⁶ The Secretary also directed reporting in the event the outage schedule or estimates changes from those presented in the November 29 Application. PJM and Dominion Energy Virginia submitted a report to the Secretary on January 11, 2018, on the dates Yorktown Units and/or 2 were operated and associated air emissions (the January 11 Report”). Because the intake circulating water usage data for Yorktown Unit 2 operations was not yet available on January 11, 2018, PJM and Dominion Energy Virginia submitted a report on January 25, 2018, reporting to the secretary the water usage data for Yorktown Unit 2 operations on the dates PJM dispatched Yorktown Unit 2 (*i.e.*, January 2 through January 8, 2018).

The December 13 Order stated that “(i)f the conditions creating the emergency remain substantially unchanged, a renewal request should be submitted at least 14 calendar days before (the September 14 Order) expires.”¹⁷ Since the December 13 Order expired on March 13, 2018, PJM respectfully submits this renewal request.

II. RENEWAL REQUEST

As stated in the June 13 Application, the Skiffes Creek Transmission Project was expected to be completed and placed into service approximately 18-20 months after receipt of all applicable permits. With issuance of the U.S. Army Corps of Engineers’ (“Army Corps”) permit

¹⁶ December 13 Order, page 2, paragraph C.

¹⁷ December 13 Order, page 2, paragraph D.

on July 3, 2017, Dominion Energy Virginia started construction of the Skiffes Creek project on July 10, 2017. As reported on October 12, 2017, the Skiffs Creek Transmission Project is scheduled to be completed May 12, 2019.¹⁸

Thus, given the continued extended nature of the emergency, PJM respectfully submits that the emergency continues to exist as set forth in the June 13 Application, and the Renewal Applications and as determined by the Secretary in the June 16 Order, September 14 Order and November 29 Order.

Therefore, PJM respectfully requests that the Secretary grant this renewal application and order the continued operation of Yorktown Units 1 and 2 to alleviate the emergency described in the June 13 Application, and the Renewal Applications prior to the expiration of the current order (*i.e.* March 13, 2017) under Section 202 (c) of the FPA. PJM request the requested renewal order provide as follows:

- (i) that an emergency continues to exist in the North Hampton Roads area of Virginia due to a shortage of electric energy and a shortage of facilities for the generation and transmission of electric energy and that issuance of a renewal Order will meet the emergency and serve the public interest;
- (ii) from March 14, 2017 to June 11, 2018, Dominion Energy Virginia is directed to operate Yorktown Units 1 and 2 as directed by PJM as needed to maintain grid reliability or for other local area transmission issues;

¹⁸ In accordance with the Secretary's directives, PJM will report on changes to the Skiffes Creek Transmission project construction schedule and revised outage schedules as necessary and appropriate.

- (iii) the limitations on operations ensure, to the maximum extent practicable, consistency with applicable laws and regulations, and the reporting requirements for operations and estimated emissions ensure transparency of implementation;
- (iv) consistent with the dispatch methodology submitted by PJM on June 27, 2017, good utility practice and the PJM Tariff, PJM and Dominion Energy Virginia shall exhaust all reasonably and practically available resources including demand response and identified behind-the-meter generation resources to the extent that such resources address maintenance of grid reliability, prior to operating Yorktown Units 1 and/or 2;¹⁹
- (v) Dominion Energy Virginia shall continue to follow the dispatch methodology submitted by PJM on June 27, 2017; and
- (vi) Every two weeks, PJM and Dominion Energy Virginia shall report all dates on which Yorktown Units 1 and/or 2 are operated as well as the estimated emissions and water usage date for those dates; and
- (vii) In the event that the outage schedule or estimates change from those presented in the renewal application, PJM and/or Dominion Energy Virginia shall also provide updated outages schedules and associated Yorktown Units 1 and 2 emission estimates within 2 weeks of such change.

¹⁹ See Footnote 10.

Respectfully submitted,

/s/ Steven R. Pincus

Steven R. Pincus
Associate General Counsel
PJM Interconnection, L.L.C.

Craig Glazer
VP, Federal Government Policy
PJM Interconnection, L.L.C.

Cc (via electronic mail): Pat Hoffman, U.S. Department of Energy
Catherine Jereza, U.S. Department of Energy
Rakesh Batra, U.S. Department of Energy
Michael C. Regulinski, Dominion Energy Services, Inc.
Casey Roberts, Sierra Club Environmental Law Program